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THE MORIORS OF CHATHAM ISLANDS

BY

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THE MORIORIS OF CHATHAM ISLANDS

By H. D. SKINNER

INTRODUCTION

SCOPE AND METHOD

My attention was first turned to the material culture of the Morioris about the year 1906. The view that then prevailed in New Zealand, a view which has been supported by the weighty authority of Percy Smith (62)*, was that the ancestors of the Morioris were representatives of the earliest ethnic wave into New Zealand, whence they had been driven by later and more warlike immigrants from Tahiti. If this were the true account of their origin, and the Morioris did represent the earliest stratum of mankind in New Zealand, it was evident that a study of their social system, of their religion, and of their art would yield results of the first importance in any attempt that might be made to write the history of society, religion, or material culture in New Zealand.

There were, however, several facts which seemed to indicate that the problem of Maori and Moriori origins was not so simple as the current explanation assumed. That explanation was based on traditional evidence derived from the Maoris, for Moriori tradition was vague and uncertain. The Maori tradition stated that the people whom the Tahitians found in New Zealand were black and that their culture was extremely primitive. But Moriori culture, though simple, was not in any way more primitive than that of the Maoris. And since a series of investigations in Moriori craniology had shown that the Morioris were in no degree less Polynesian than the Maoris, it became evident the Maori traditional account was not in consonance with the facts, and that an examination of all other lines of evidence was called for.

It seemed desirable, therefore, to make as thorough an examination as possible of the material culture of the Morioris in order to ascertain whether it afforded more reliable evidence of Moriori origins than did Maori tradition. With this object in view I examined the Moriori material in New Zealand museums and private collections and planned an expedition to the Chatham Islands. But the outbreak of war upset all plans, and after a spell of campaigning I wrote the first draft of the present memoir in England without being able to visit the islands with which it deals. This was much less a disadvantage than might appear, for

*The numbers in parentheses refer to the bibliography, pp. 136-40.

some of the most important collections of Moriori material, including that of the British Museum, the Pitt-Rivers Museum collection, and the collection of the Cambridge University Museum of Archaeology and Ethnology, are there available. When it is remembered that there are also in England several other public and private Moriori collections in addition to these, it seems likely that a more complete knowledge of Moriori material culture can be obtained in the British Isles than at the Chathams themselves. At the British Museum, also, I was able to examine the log of Lieut. Broughton, discoverer of the group.

After my return to New Zealand I was able in 1919 to make the long-deferred visit to the Chatham Islands. These islands have always been difficult of access. An opportunity of visiting them had been promised by the shipping company months before, but the date of departure had been postponed again and again. Finally I was summoned to Lyttelton only to be told on arrival that the Marine department forbade the passage of any one not a member of the crew. There were on the wharf a party of disappointed islanders by whom I was informed that they numbered some forty in all, and that some of them had been waiting for nearly a year, having been unable to secure a passage in the "Kahu," the last boat to visit the group. I therefore joined forces with Mr. H. S. Irwin, M. A., who was under orders to inspect the schools at Chatham Island, and we slipped unobserved down onto the coal in the forward hold, where, fortified by some meat pies secured at a neighboring pastrycook's, we remained until the "Ngahere" was well on her way and the coast of New Zealand was fading into darkness astern.

The exigencies of shipping made the visit all too short, but I was able to see the two surviving Morioris, to examine a number of old settlement sites, to study the carvings on the *kopi* trees and the so-called inscription above the cave on the west shore of Te Whanga, and to collect a considerable amount of hitherto unrecorded information from the settlers. Both of the inhabited islands were visited, and so it was possible to study at first hand the environment in which Moriori culture was nurtured. To me the islands will always be associated with memories of boundless hospitality, of long days in the saddle, and of nights spent before the great wood fires when talk, centering first on the ancient inhabitants of the group, passed on to every subject under the sun, the Great War then recently ended forming perhaps the most frequent subject of discussion.

The Moriori race is now virtually extinct, and it is probably more than fifty years since any Moriori culture element was put into actual practice. For information on all aspects of Moriori life other than material culture it is therefore necessary to draw on the records or the memories of past observers. These sources vary so greatly in reliability that it is always essential to quote authorities, using wherever possible their actual words. The source of all quotations used

in this paper will be found in the bibliography (see pp. 136-140) and in the notes which precede it are my views as to the relative value of the authorities quoted.

The attempt was made to read everything original that had been written about the Morioris and as regards published matter the attempt has apparently been successful, for the greater part of the published material has made its appearance in New Zealand and is readily accessible to a New Zealand student. All the important published statements that I have seen relating to Moriori material culture have been incorporated in the present work and due acknowledgment of each has been made. As regards manuscript information it is not possible to feel so confident, although it seems unlikely that Dr. McNab in his world-wide research left any considerable source of information unexamined.

The illustrations of Moriori objects are, with few exceptions, from photographs. One of the objects of the present research has been to determine the closeness of the relationship existing between the material culture of the Morioris and that of other parts of Polynesia, and as this can be indicated best by comparative examples, these have been supplied by line drawings in the text.

In the section which deals with axes, adzes, and chisels what is believed to be a new method has been followed. The implements have been classified into groups or types, and it happens that no type has been erected that does not also exist in some other part of the Pacific. For each type a "type specimen" has been named, and wherever possible its front, side, and back views have been given, as well as the cross-section. Unfortunately it has not been possible to get three views of all. Type specimens are shown at a uniform scale of 1:2, and all others are shown at approximately the same scale. It is believed that by this method students will be able to obtain a much more accurate knowledge of the form and relative size of these implements than has been possible by any method previously used. I greatly regret that weights were not secured in every case, as the average weight in each type would have indicated very clearly the average bulk.

It is not possible to appreciate the material culture of any people without a knowledge of their daily life and social organization, nor is it possible to discuss their origin without taking into consideration their racial characteristics and their traditional history. Sections dealing with bodily and mental characteristics, language, social structure, religion, and other kindred subjects have therefore been prefixed to the main body of the memoir. In the preparation of these sections a great deal of scattered material has been brought together, and I have added a considerable amount that is new. Though dealing primarily with Moriori material culture, this paper has thus become a general account of the Moriori people.

ACKNOWLEDGMENTS

For hospitality during my visit to the Chatham Islands I have to thank especially Miss Martha McClurg and Mrs. Renwick, both of Chatham Island, and Mr. A. H. Hunt of Pitt Island. For information and help of other kinds at the islands my thanks are due to Miss Seymour, Dr. Gibson, and Messrs. Odman, Hislop, Ritchie, R. McClurg, T. O. McClurg, H. S. Irvine, John Renwick, T. Solomon, and Prendeville, and also Master W. Murphy. The landscape, Plate xxxv, is from a photograph taken by Mr. H. Renwick.

In the course of work on Moriori material culture the collections in the following museums were examined: Otago University Museum; Canterbury Museum; Dominion Museum; Wanganui, Napier, and Auckland Museums; British Museum; Pitt-Rivers Museum; and the Museum of Archaeology and Ethnology, Cambridge. To the curators and staffs of all of these I return hearty thanks. I have also to thank the following for permission to examine their private collections: Lord Northesk, Mrs. John White, Mr. C. V. Hodgson, Dr. Dendy, F. R. S., Miss R. Ritchie and Mr. W. O. Oldman. The small but very choice collection of Mrs. E. R. Chudleigh deserves special mention, and I have to thank Mrs. Chudleigh for help and information freely given.

For the illustrations of this memoir my thanks are due to many. For nearly all the line drawings I have to thank my wife. An examination of the three-score drawings will reveal how great is my debt. With the name of my wife I must join that of my father who not only arranged for and supervised the taking of all photographs from the Canterbury Museum collection and from the Kinsey collection, but also supplied the excellent account of the structure of the Moriori *iwaka* (see p. 113). For photographs of specimens under their charge I wish to thank Dr. Allan Thomson, Dr. W. B. Benham, F. R. S., Mr. T. F. Cheeseman, Mr. Henry Balfour, Sir Hercules Read, Baron von Hugel, and the Director of the Bishop Museum. For permission to figure specimens from private collections I must thank Mrs. E. R. Chudleigh (Christchurch), Sir Joseph Kinsey (Christchurch), Mr. T. V. Hodgson (Plymouth), and Mr. A. W. F. Fuller, and Mr. W. Oldman (London). For other help I extend my thanks to Mrs. D. McGregor Reid, Miss R. Ritchie, Messrs. Willi Fels, Elsdon Best, F. C. McClurg, W. Oldman, Harold Hamilton, T. Grant Taylor, E. F. Northcroft, Harry G. Beasley and Dr. R. V. Fulton. Dr. W. B. Benham, F. R. S., supplied me with photographs of Dr. Elmore's drawings of the New Zealand cave paintings. Dr. Arthur Dendy, F. R. S., helped me with much information about the Chathams. Dr. A. C. Haddon, F. R. S., suggested the sources of several of the comparative examples figured. Mr. S. Percy Smith has helped me with advice on many points, while the greater part of the section dealing with the Moriori dialect is quoted with permission from the paper on that subject by Archdeacon Herbert Williams. An examination of the references to the figures will show how much I owe to the works of Mr. James Edge-Partington. To each and all I tender my sincere thanks.

My thanks are extended also to the Trustees and Director of Bernice P. Bishop Museum, whose encouragement and generosity has made publication possible.

GEOGRAPHY OF THE CHATHAM ISLANDS

POSITION AND AREA

The Chatham Islands which form part of the Dominion of New Zealand lie some 536 miles east of Port Lyttelton. Chatham Island (Rekohua), the largest of the group, has an area of 222,000 acres, of which 46,000 is lagoon. The only other islands of any considerable size are Rangiauria (Pitt Island) and Rangatira,

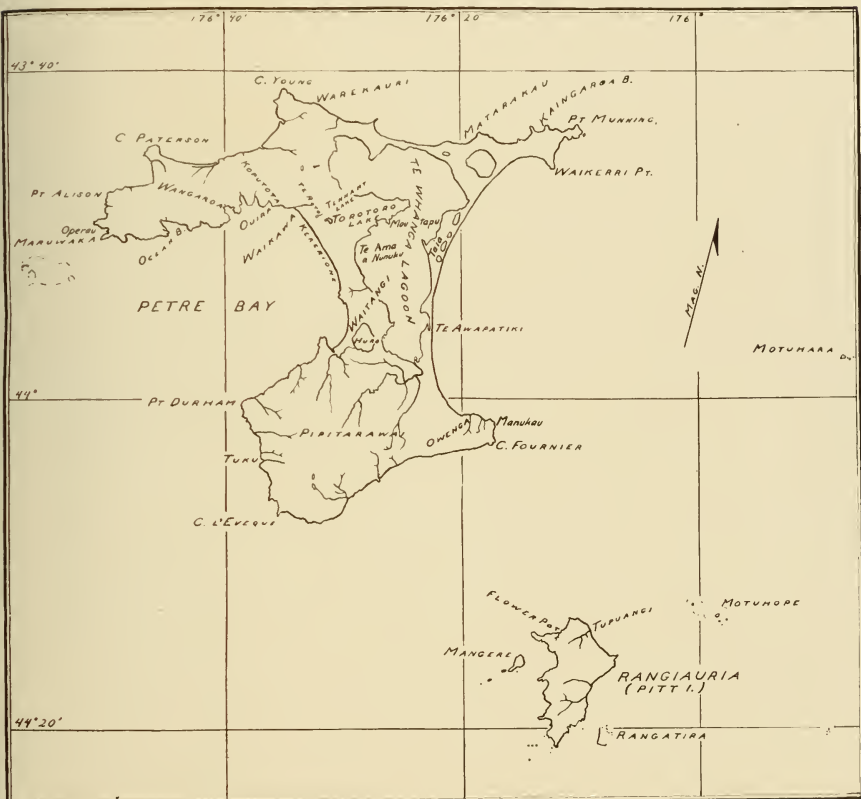


FIGURE 1.—Map of Chatham Islands.

the latter being the largest of the cluster formerly called the Cornwallis Islands. The remainder of the group are rocky islets, tenanted by sea-fowl and in the old days by seals. (See map, fig. 1.)

POPULATION

The Chatham Islands, which form part of the Dominion of New Zealand, have a population numbering about 450, in which a dozen nationalities are represented, Maoris predominating. The principal industries are sheep-farming, cattle-breeding, and fishing. It is believed that when Broughton discovered the islands in 1790, they were inhabited by about 1,600 Morioris.

The extermination of the Moriori race, which is even yet not quite complete, has been drawn out over more than a century. We have no information as to the effects of early European intercourse, nor what diseases the sealers and whalers introduced. Welch's evidence indicates that venereal diseases were at any rate not rife, but from what we know of the results of European contact in other parts of the Pacific it is highly probable that measles, influenza, and consumption had taken their toll during a whole generation before the Maori invasion. To these diseases must be added the privations arising from the extermination of the seals, which deprived the Morioris of their proper clothing, and from the activity of the whaling fleet, which deprived them of one of their sources of food. Mair (52, p. 156) has preserved a census of the Moriori people in which the names are recorded of all who were alive immediately before the Maoris landed, the total being 1,673. Of these, 216 are stated to have been killed and eaten by the Maoris. "In 1839," says Mair (16, p. 312), "an epidemic carried off great numbers of Morioris, sometimes as many as forty dying in a single day. This epidemic was, no doubt, identical with the great plague of influenza, which, in the same year, committed such ravages in New Zealand. Probably one-half of the Morioris died from this cause."

When Dieffenbach visited the island in 1840 he estimated the Moriori population at less than 90, but in this respect, as in others, his report is inaccurate. Bishop Selwyn states that when he visited the island in 1848 a careful census showed 268 Morioris.

The following figures supplied by various observers indicate the course of Moriori decline:

1800	1835	1848	1889	1901	1920
Smith	Mair	Selwyn	Tregear	Dendy	Skinner
2,000	1,673	268	27	12	2
(estimate)			5 half-castes		

A third Moriori has been found by Dr. Buck living among the Nga-puhi. A fourth lived the greater part of his life among the Southland Maoris and died among them in 1920.

The population of the group is at present smaller than it has been for many centuries.

CLIMATE

The official records give the following data, based on observations taken near Waitangi during a period of 23 years. The mean maximum temperature ranged from 50.8 in August to 63.8 in January, the annual average being 57.0.

The mean minimum temperature ranged from 40.4 in July to 49.9 in December with an annual average of 46.4. The approximate mean monthly average for the period was 51.7.

The rainfall during a period of 24 years ranged from 2.35 inches in October to 3.16 in March, the annual average being 38.7 inches.

The results of observations made in 1914 make possible a comparison of the rainfall in the Chathams with that in New Zealand. The annual rainfall in Wellington in 1914 was 31.9; in Dunedin 31.3; and in Waitangi (Chatham Islands), 48.6. The days of gales or high winds in Wellington in that year were 68; in Dunedin, 43; and in Waitangi, 32. Ten days of snow are recorded for Dunedin in that year; none for Wellington, and one day for Waitangi.

From these figures it will be seen that in temperature Waitangi stands close to Dunedin, though slightly more equable. In annual rainfall it surpasses both Wellington and Dunedin and stands close to Invercargill which registered 49.5 inches in 1914. Snow, however, was registered at Waitangi only once.

The figures give no indication of the misty atmosphere of the Chatham Islands, as a result of which there are few days of clear sunshine.

GENERAL APPEARANCE

I visited the islands at the close of 1919. We left Lyttelton on the evening of December 9th, and at 4 p. m. on the 11th we saw through the sea fog the loom of high land which Captain Dilner identified as The Horns. (See fig. 1, map.) As we steamed parallel with the rocky southern shore of Petre Bay we watched with keen interest the only part of the island not hidden by mist, a green coastal belt of pasture dotted with patches of low bush among which were set occasional red-roofed farmsteads. A mile or two inland the turf merged into peaty moorland which slopes up to the broken country about Pipitarawai nearly a thousand feet in height.

The anchorage at Waitangi receives some slight protection against south-west weather from a steep bluff, composed in part of bands of red and yellow clays which contrast strongly with the green turf overlying them. Above the beach which is sheltered by the bluff are the houses of Waitangi, the principal settlement in the group—cargo-shed, post-office, court-house and prison cells, two licensed

accommodation houses, stores, one or two dwelling houses, and, on the rising ground to the south-west, the wireless station.

From the cliff-top near the wireless station a fine view may be obtained towards every point of the compass. The red crumbling cliffs run westward for a mile or so where they give place to shingle beaches, backed by slopes of English pasture. These slopes are intersected by lines of low somber bush, marking shallow gullies, and fade inland into peaty country clothed, like much of the rest of the island, by fern and sedge. Across Petre Bay the northwest coast of the island shows faintly, the misty atmosphere making it seem more distant than it really is, its low contours broken by irregularly spaced conical hills. Eastward, across the anchorage, the white beach is backed by a range of high sandhills, beyond which low scrub-covered hills slope down to the muddy waters of Lake Huro. In the far distance, beyond Lake Huro, the south end of Te Whanga, bounded by a sandspit on which the open sea beats in white breakers, can be descried faintly through the haze. To the south and southeast lies the main mass of the island, which, though of no great height, is very broken, full of peat bogs, and covered with much of its ancient stunted plant covering.

The road from Waitangi to the northern parts of the island crosses the Nairn, a tidal creek, and follows the wide beach of Petre Bay for about two miles, when it turns in through the sandhills and runs north about midway between Te Whanga Lagoon and the shore of the bay. For about a mile eastward from the Nairn the sandhills are being eroded by the sea and the face thus exposed shows two occupation-levels. The upper one is Maori, and contains besides shells and bones many fragments of clay pipes, broken bottles, and iron nails. From the Moriori layer below it one or two objects were secured. The whole length of Petre Bay gives evidence of the ravages of drift sand, large areas of which, however, have now been reclaimed by the planting of marram grass. In early times the sandhills were held in place by a covering of native vegetation, which appears to have merged on its landward side into a continuous belt of *kopi* trees, the Maori *karaka* (*Corynocarpus laevigatus*). A tidal wave in the 'sixties broke up the outer edge of the plant-covering, and the westerly gales set the sand drifting. In the sand-gullies excavated by the wind the greater part of the Moriori artifacts in collections have been found, and here also have been laid bare great quantities of bird-bones, many of them representing the extinct species which give the Chatham Islands their zoogeographical interest.

Further to the north the road crosses limestone country, at one place passing close beside weathered limestone crags. It is very probable that a systematic search in the shelters and crevices of the limestone will result in the discovery of many Moriori artifacts, perhaps even textiles, of which none are at present known.

Beyond the limestone belt the surface is peaty and dry—good going in summer but very difficult in winter. Here the road passes three lakes, the sloping shores of which still retain enough of their original bush to make them beautiful. At this point I passed for the first time through bush—as opposed to scrub—that still retained somewhat of its original character. Extremely dense, and much lower than is usual in New Zealand, it contained no large timber, for though the *kopi* tree, which occurs commonly, may in favorable surroundings attain a height of fifty feet, its trunk never achieves any considerable diameter. The ground under the trees is almost bare, though the trunks stand very close together. Patches of ferns occur, but not so commonly as in New Zealand, which may be due in part to the depredations of stock. The height of the bush is remarkably uniform, and the tree-tops, when seen from above, form a compact undulating carpet, close-trimmed by the wind. The area of actual bush appears to be rapidly diminishing, while heath, which in ancient times probably occupied a larger area than bush, seems to remain stationary, all efforts to grass it being unsuccessful.

In the southern part of the island the bush was so dense that two members of Mr. Percy Smith's party, surveying the district in 1868, were "bushed" and very nearly lost their lives. I was told that in the early days of European settlement spider-webs were one of the principal annoyances in traversing the bush, but that starlings and other introduced birds quickly despatched the spiders, leaving the vegetation, as it was when I saw it, entirely free from webs.

On the seaward side of the lakes is a wide belt of sandhills fringing the Kekerione beach. At their northern end is a Moriori burial-place where the bones of scores of individuals lie scattered on the surface, among them some rude bone-boxes, much weathered. A little to the west are a number of old house or camp sites marked by oven stones and piles of bird-bones. No fishbones were observed, and very few shells, but there were what would in New Zealand be considered an exceptional number of seal bones and teeth. Micaceous schist occurs here and large blocks of it lie scattered among the sandhills, with occasional fragments of schist weapons. On these sites we obtained a number of Moriori artifacts in stone, bone, and seal ivory. Beyond the Waikawa a track leads westward over very barren peaty slopes covered with bracken, with a narrow belt of turf and trees below on the left along the rocky shore. Between Koputota and Ouira is a grove of handsome *akcaka* in process of invasion by drift sand, from the white surface of which the trunks project. Beyond Ouira is a low headland composed of basaltic columns. In this neighborhood we found several objects including a rectangular pumice box. The place is interesting as having all the features of a typical Moriori station: a small stream runs down to a sandy beach, east of which are rocks, with tidal pools and deep lanes into which, in calm weather, fish-nets and pots might be

dropped. Koputota at the eastern end of the rocks was a small settlement on a terrace, and is still covered with fish- and bird-bones and shells.

Southward from Te Roto, on the Kekerione Beach, are the Lily Rocks, a precipitous bluff in the clefts of which the "Chatham Island Lily" (*Mysotidium*) still flourishes, though long since exterminated by stock on all accessible ground. On the southern edge of the rocks are some bone-boxes, which, however, we were not able to find on the morning of our visit. Riding back from Lily Rocks towards Torotoro Lake we passed through a belt of *kopi* trees which far exceed in size any that I have ever seen in New Zealand. Accurate measurement was impossible, but individual trees appeared to be more than 50 feet in height. In the same belt further to the north, overlooking Tennant Lake, is a sheltered terrace on which a rectangular depression marks the site of a house some seventy feet long and twelve broad. Within the rectangle the larger part (*kahunaki*) of a fire-making apparatus was found. On a number of the surrounding *kopi* trees there were crude carvings of the human figure.

The exigencies of the steamer time-table prevented me from visiting the northern part of the island. The following is from Dieffenbach's brief account of it as it was in 1840 (5, p. 195):

The surface of the northern part of the island is generally undulating, deep, and boggy. In the hollows it is often marshy. Wherever the surplus water has been drained a rich vegetation of fern and *Phormium tenax* has sprung up. This is particularly the case on the low hills above the seashore which are well wooded, and encircle the island with a verdant zone. The conical hills, which rest on a volcanic rock, have a very rich soil in their neighborhood, which is generally covered with a vegetation of fern and trees, and these fertile spots are like so many oases rising from the surrounding bog. The northern part of the island presents another remarkable feature: viz., several lakes, usually surrounded by gently sloping hills. They are most frequent near the northern coast, and are usually one or two miles in circumference.

Te Whanga Lagoon is a shallow and unattractive sheet of water crossed by a long ford and occupying about one-fifth of the total area of the island. Part of its western shore is fringed by low limestone cliffs, but the rest is low and characterless. Near the northern end of these cliffs, in a shallow cave called Te Ana Nunuku, are a series of carvings in the limestone rock which are fully described in another section of this work. (See p. 71.)

The first part of the track from Waitangi to Owenga lies through well-grassed, hilly country, with the lakes below to the left and the high rough main mass of the island to the right, a region to which the settlers have given the name "Tobacco Country." It has been excellently described by H. O. Forbes (34), who spent some days there, excavating without success a midden at one of the few places on the shore of Pitt Strait where it is possible to descend to sea level. The Tobacco Country has as its southern boundary a sheer wall of cliff twelve miles in length, the eastern half without a break, the western only slightly less forbidding. From the launch in which we crossed to Pitt Island it presented an imposing spec-

tacle, its eastern end a stack of basalt columns calling to mind the cliffs of Staffa, its wet black wall fading westward into grey mist, the grey-green swell smashing ceaselessly at its base.

The track from Waitangi to Owenga enters peat country before the Awanunga Creek is reached, and this makes doubly attractive the green bush fringing the beaches and waterfalls of the stream. Beyond the Awanunga the road passes over peat and swamp, through sandhills, and finally along the open beach of Hanson Bay. About Owenga lies some of the best country of the island, and here, also, is situated the headquarters of the fishing company.

A short ride north from Owenga along the shore of Hanson Bay brings you to Te Awapatiki, the outlet by which Te Whanga discharges its surplus waters, and here, on the low southern headland may be seen the embankments of an extensive *pa*. Crossing Te Awapatiki in a rowing boat, one lands on the southern end of the great sandspit that runs for a dozen miles or more northeastward till it terminates near Waikerri Point. The outer edge of the spit is formed by a ridge of high sandhills among which lie many Moriori bones. Under the shelter of the ridge there once flourished a thick belt of *kopi* trees now fast disappearing before the ravages of stock. On the larger of the remaining trees are a number of rough carvings. Midway along the spit are four shallow lakes, giving variety to a somewhat monotonous landscape.

From Owenga eastward to Cape Fournier the coast is rocky, with occasional sandy beaches showing many signs of Moriori occupation; indeed geographical considerations seem to indicate this as the most favorable district for Moriori settlement in the whole group. The hill slopes face the sun and the low ground is sheltered against westerly and southerly weather. The bush must once have afforded shelter to teeming bird life; Te Whanga with its limitless supplies of eels and ducks was close at hand; while the sea could have supplied with fish a far larger population than ever dwelt at the Chathams. These beaches were probably the point of departure for *waka* (the wash-through canoe of the Moriors) in making the passage to Pitt Island or to Motuhara or to the other islets where the albatross breeds.

Mr. Prendeville, local manager for the fishing company, very kindly gave me free passage to Pitt Island, our landing being made beside the "Flower Pot" rock, on a small beach below the homestead of the original Frederick Hunt. The proportion of good land is considerably higher on Pitt Island than on "the main," and its general appearance is much more attractive, but it can never have supported anything approaching the population of the main island. When I visited it, it had less than a score of inhabitants while Chatham Island had more than 450, and about the same proportion probably held good in Moriori times. We walked over

to Tupuangi, on the north-east coast of the island, on a day of brilliant sunshine which made this spot seem the most attractive that I had visited on the group. A dozen miles away to the northwest the cliffs of Chatham Island rose from the sea like a palisade, while to the east across the water were the low domes of Motuhope Reef. Above the yellow curve of Tupuangi beach rises a bushy terrace, perfectly sheltered from westerly and southerly winds, across which a stream has cut its miniature valley. This terrace shows all the signs of long occupation, but as it is carpeted with turf and we had no time for systematic digging, it yielded nothing to our search.

I examined very closely the coast immediately to the west of the Flower-pot, hoping to find the cave in which Mr. Percy Smith had found the only specimens of Moriori textiles recorded by Europeans except by the discoverers of the islands. I was not able to find it, and concluded that it had probably been buried by drift sand.

I did not visit any other island of the group. The only one of any considerable size is Rangitira, or South East Island, on which some five hundred sheep are now run. It does not appear suitable for permanent occupation, and no Moriori is likely ever to have spent a winter there, unless through stress of tribal feuds. That it was visited we know from the evidence of stone implements, from Moriori information, and from Biscoe, who reports that the Moriori canoes were there in 1831 (59, p. 86. He may be referring to Pitt Island). Shand indicates (56, p. 10) that the Morioris visited Star Keys (Motuhope), and the fact that Stewart calls the main rock "Native Island" probably indicates that Morioris were on it when he surveyed it in 1809. Mangere and the islets about it would be much less difficult to visit than Motuhope.

COMPARISON WITH OTHER PARTS OF POLYNESIA

From what has been said it is evident that conditions of life at the Chatham Islands were widely different from those of any group in central Polynesia. An intermediate stage considerably lessening the contrast is supplied, however, by the conditions of life in northern and central New Zealand, in which country the Morioris were probably living before they migrated to the Chatham Islands; while if the districts from Banks Peninsula southwards be compared a fairly close similarity in climate, flora, and fauna will be observed. The breadfruit tree, the coconut palm, and the paper mulberry, trees of fundamental importance in the social economy of the rest of Polynesia, are not present in any part of the New Zealand-Chatham Island area. The paper-mulberry was cultivated as an exotic in the north and ribbons were made from its inner bark, but it was not used to make clothing.

In northern and central New Zealand the taro and the sweet potato were cultivated, but since neither of these plants could be grown in south New Zealand nor at the Chathams, native life in these districts was devoid of any element of horticulture. Hogs and fowls were absent from both groups, while the domesticated dog, though found in all parts of New Zealand, was unknown at the Chathams.

Thus New Zealand lacked several elements that are characteristic of Polynesian culture, and the Chatham Islands lacked these and still others. The Morioris had no cultivated plants of any kind, nor had they any domesticated animals. More important still, they had neither large trees from which to build canoes and substantial houses nor building stone such as was used in more than one Polynesian island. Thus most of the elements tending to attach society to a fixed locality were absent, and the Moriori social group was, in consequence, largely migratory, building rough houses for winter occupation but deserting them during the greater part of the year, moving from beach to lagoon, from lagoon to uplands, and from uplands to coast again, as the food supply fluctuated season by season. In such conditions the aesthetic arts inevitably languished and social life diverged more and more from what are usually regarded as Polynesian standards.

HISTORY OF THE CHATHAM ISLANDS

MORIORI VERSION

For the traditional history of the Moriori we have to depend almost entirely on the material collected by Shand, the traditions being printed in full in his publications of 1894 and 1911 (35 and 56), and more compactly, but with some additions, in his paper of 1904 (31).

The Morioris could give no account of the first discovery of their islands. The first canoe of which they had any record was that of Kahu, of whose coming there were two versions. The people of the north end of the island held that he made the land at Kaingaroa, where he found their ancestors Kahuti and Te Akaroroa. Other contemporary ancestors were Maripane, who lived at Matarakau; Tamakautara, who lived at Te Awapatiki; Karangatai and Karangatua, who lived at Whangaroa; and Tapeneke and Taponi, who lived at Waitangi. The other version of the Kahu legend, in which no earlier inhabitants are mentioned, makes Kahu land at Tuku, where he left his canoe and went by land around the island. This version bristles with impossibilities and it is difficult to understand why, having adopted the northern version in his first publication, Shand should have abandoned it in favor of the other in his paper of 1904. For, leaving out of consideration a number of other difficulties, Shand was now faced with the problem of accounting for the inhabitants found in possession when, many years after Kahu's departure, the Rangimata and Rangihoua canoes arrived. Neither tradition records that any member of the crew of Kahu's canoe remained on the island, "but presumably," says Shand, "either they or some other migration did." He had evidently quite forgotten the simple explanation afforded by the northern version of the tradition which he himself had recorded many years before.

The next happening of note in Moriori history after Kahu's departure is the arrival at the Chathams of two canoes, "Rangimata" and "Rangihoua," an event which occupies the central place in Moriori traditions as we now have them. The land of their origin is not clearly indicated, but the crews were fugitive members of the Wheteina clan, defeated in warfare by the clan Rauru. They found the islands inhabited by a people who spoke the same language that they did, and who are called Te Haumata. Not many years passed by before a canoe named Oropuke, manned by members of the Rauru clan, reached Chatham Island. Warfare broke out again between the rival clans, but was forbidden by Nunuku, a chief who appears to have been of Haumata descent. The peace thus established by Nunuku is said to have been broken only by the Maori invasion of 1835. The canoe Rangimata is said to have reached the Chatham Islands twenty-eight generations back from the year 1900, or about 1200 A. D.

Before we discuss the Maori version of the discovery of the Chatham Islands there are two names—Wharekauri and Kiriwhakapapa—which should be noted carefully. Shand (52, p. 152) says:

Some whalers, coming from New Zealand in the first instance, shipped Maoris as hands, among whom there happened to be one Pakiwhara, a Ngati-Tama, and Ropata Tama-i-hengia, a well-known chief of the Ngati-Toa tribe. The latter dwelt with the Moriors at Wharekauri, the name of a small *kainga* (village) on the north coast. Not understanding their language sufficiently, on his return to Wellington he failed to give the proper name of the island—Rekohu—but spoke of it as "Wharekauri," the name it has been called by the Maoris ever since.

Shand (56, p. 3) explains the nickname Kiriwhakapapa as follows: "The skin of their legs was mottled and scaly—probably due to the habit of toasting them before the fire whilst squatting on their heels; hence the name of *Kiriwhakapapa* given them by the Maoris." Percy Smith (56, p. 216), however, gives a different account of the origin of the name.

MAORI VERSION

The Maori version of the discovery and colonization of the Chatham Islands is given in detail in Volume IV of the *Memoirs of the Polynesian Society*. This version, which was written down by T. Whatahoro, owes its credence at the present time to the fact that it has been accepted by two of the foremost of Maori scholars—Mr. Percy Smith and Mr. Elsdon Best. It is with extreme reluctance and regret that I find myself compelled to differ in my estimate of the Maori version from friends to whom I owe much.

In the Maori version the Moriori are stated to be a fugitive section of the original inhabitants of New Zealand, to whom the name Maruiwi is usually applied.¹ The country of their origin, which was larger than New Zealand, lay to the south-west of it. Their ancestors, while out fishing in canoes, had been caught by a storm and driven before it till they reached New Zealand. The non-existence of a land, great or small, to the south-west of New Zealand, at once raises doubts as to the trustworthiness of the tradition, and these are not allayed by an examination of other details of the story. For, putting the initial difficulty aside, and supposing Maruiwi to have come not from a land larger than New Zealand but from some Melanesian island, it is extremely unlikely that any fishing party would have their women with them or sufficient food to carry them across more than a thousand miles of ocean. Nor is it possible that a people having a culture so primitive as that attributed to Maruiwi could ever have built canoes capable of surviving an ocean voyage.

¹ This use of the name Maruiwi is approved by Mr. Best but is regarded by Mr. Percy Smith as entirely erroneous (*Polynesian Soc. Jour.* vol 25, p. 176).

But the difficulties presented by these points are small compared with those raised by the physical characteristics of Maruiwi. One authority, quoting Whatahoro's material, says:

They were a very dark-skinned folk of repulsive appearance, tall, spare, and spindle-shanked, having flat noses, with up-turned nostrils; in some cases the nostrils seemed to be all the nose. They had flat faces and overhanging eyebrows. They were big-boned people, and they had curious eyes, like those of a lizard. An idle folk and a chilly, who felt the cold much, and slept anyhow; they were of a treacherous disposition. They did not preserve their traditions as we do.

In another place the same authority² refers to them thus:

On account of their peculiarities, our ancestors called them in contempt *kiri whakapapa* and *pakiwhara*. The Maruiwi are stated to have been attacked and slaughtered by the ancestors of the Maoris till the survivors fled to D'Urville Island, where they were again attacked. The last that was seen of them was six canoes which were observed passing through Cook Strait on their way to Wharekauri.

This name we are told in this new Maori version (Polynesian Soc. Mem. IV, p. 153) was given to Chatham Island by its discoverers more than a thousand years ago, and minute details are given of the circumstances in which it originated. But, as we have seen, Shand states that the name originated in the mistake made by Ropata in 1835. Similarly, while Shand states that *kiriwhakapapa* is a modern nickname, the Maori version asserts that it arose in New Zealand many centuries ago, before the Moriori ancestors colonized the Chathams.

A comparison of physical characteristics shows that the mythical Maruiwi are the direct antithesis of the Moriori. Maruiwi were tall and thin, while their alleged descendants are short and bulky. The Maruiwi nose was flat even to non-existence, while the Moriori are distinguished by unusual prominence in that organ. Maruiwi skin-color was like that of ripe *tutu* berries, while that of the Moriori is the normal Polynesian brown. Maruiwi hair was straight, while that of the Moriori was often waved, and sometimes frizzy. Indeed this last characteristic has been used by Shand and also by Mr. Best as evidence of relationship between the Morioris and the Urewera natives. Moriori physical characteristics are not our sole check in this matter, for Ngati-Mamoe are stated to be of Maruiwi stock. Half the Maoris of Otago and Southland are of Ngati-Mamoe descent, but they adhere more closely to the normal Polynesian type than perhaps any other tribe in New Zealand.

On the cultural side the evidence is no less convincing: Maruiwi lived on forest products solely. Moriori traditions, however, have numerous references to certain cultivated plants, though these would not grow at the Chathams. Maruiwi

² Best, Elsdon, Maori and Maruiwi: New Zealand Inst. Trans. vol. 47, p. 436, 1915.

knew nothing of fine weaving, yet Mr. Percy Smith tells me that he found in a cave on Pitt Island fragments of weaving finer than any he has ever seen in New Zealand. Three weapons of war are stated to have been adopted from Maruiwi by the Maoris: the *huata* or spear knobbed at the butt, the *hoeroa* or curved whale-bone weapon, and the *kurutai*, a stone weapon the shape of which is not known. Omitting the *kurutai*, therefore, we have two Maruiwi weapons—*huata* and *hoeroa*—neither of which has ever been recorded among the Moriori. In like case are the bow and the *kotaha*, or whip-lash spear-thrower, both of which are stated to have been used by Maruiwi. On the other hand, none of the Moriori weapons described in this memoir are mentioned in the description of Maruiwi.

Turning in search of truth from Whatahoro's record of Maruiwi to the traditions he records of the discovery of the Chatham Islands, even worse difficulties are met. For in this record are two conflicting stories of which Mr. Smith is compelled to admit: "It is obvious that the two stories concerning Kahu are irreconcilable, and at present there are no means of indicating which is correct" (56, p. 217). It is to be noted that in one of these versions the canoes "Rangimata" and "Rangihoua" are mentioned, as well as about a dozen names which occur in the Moriori traditions and genealogies. If there had been no communication between Maoris and Moriori in the centuries that have elapsed since the Chatham Islands were first colonized this identity of names would constitute proof of at any rate the antiquity of the Maori version. This, however, is not the case, for the circumstances in which one of the versions was collected are stated as follows: "Now, the old men who told me about this were Hauauru and Takarangi, when we went to Aramoho (near the modern town of Wanganui) to the home of Tamati Puna, to take some presents from Ngai-Tahu to him—consisting of Maori garments, a horse named Tu-purupuru, and £100 in money. These presents were from Iraia Te Ama and his elders. These old men told me what I have here repeated (about Kahu). It was in 1854 or 1855 that we paid our visit. There are lots of pedigrees of that people" (Moriors); "but enough, they are not properly arranged." (J. P. S. Vol. XXIII, p. 76). From this statement it is clear that one of the versions was collected twenty years after the invasion of the Chatham Islands, at a time when there had been intermarriage between Maori and Moriori, and when Moriori genealogies were well known to the old Maoris who supplied the version and had been discussed by them. It may be suggested that the nickname *kirihakapapa* and also "Wharekauri," the name given in error to Chatham Island by the Maori conquerors, became known to the Wanganui Maoris through the same channel as the Moriori ancestral names.

The evidence thus far examined is internal, derived from the contents of Whatahoro's record. Before a final decision can be reached on the question of the

reliability of the information regarding the Morioris contained in that record, a certain amount of additional evidence, partly internal and partly external, has to be reviewed. In reviewing it we have to consider the relative reliability of Whatahoro's information and that of Alexander Shand, a question indirectly involved in part of our previous discussion.

Alexander Shand was an accomplished Maori linguist, and he won the confidence of that section of the Taranaki tribes which settled at the Chatham Islands with a completeness that no other European has ever equalled. He became the historian of those tribes for the period which includes the series of wars and migrations ending in their conquest of the Chatham Islands. So complete and authoritative was his account of this period that when in later years Percy Smith wrote his History of the Taranaki Coast he found it unnecessary to do more for those events which Shand had described than to summarize Shand's published material. This is noted here merely as an indication of Shand's intimacy with the Maoris at the Chatham Islands and the reliability of the material he collected.

Whatahoro's informants say that the name Moriori was given to the natives of the Chatham Islands by the Taranaki invaders and that the islanders called themselves Mouririuri. But it is impossible to believe that this is the truth, and that Shand, historian of both races, was the victim of deception carried on for a period of more than fifty years by hundreds of individuals belonging to two different and often hostile races. If Whatahoro's information were true we should be forced to believe that not only Shand but a number of other observers, including Percy Smith, Hunt, Welch, and Deighton, had been deceived by the Chatham Islanders as to their race name. Hunt's statement (11, p. 28) on this point is probably our earliest authority and is as follows: "The aborigines term themselves Moriori, their conquerors still call them *paraiwharas*, or black fellows, not from their complexion, they having no darker tinge than a Maori, but in their ideas the name is synonymous with slavery." Turning to another point, Whatahoro's informants state that the name Wharekauri was given to Chatham Island by the first inhabitants and we are left to conclude that their descendants, the Morioris, applied the name in error to one of their villages. Whatahoro's authorities would have us believe that the correct usage was restored more than seven hundred years later by the Maori invaders. It is impossible to believe that these invaders should have maintained towards Shand, their historian and friend, a conspiracy of silence as to their superior knowledge on this point and should have substituted for it the fictitious tale of Ropata's mistake; both silence and falsification would have been utterly without motive. And finally if these traditions, now at length published by Whatahoro, had always been known to the West Coast natives and were, as he

informs us, discussed by some of them in the year 1855, how is it that no hint of them ever reached those most directly interested, the Maoris at Chatham Island? Or if it did reach the island, why should Shand have been kept in ignorance of matter of the kind for which he was most keenly searching? And are we to suppose that this conspiracy of silence has been maintained to the present day, not only by the rank and file but by such cultured representatives of the Maoris of Chatham Island as Sir Maui Pomare, Native Minister in the present Cabinet, and Dr. Buck? It is on these grounds that I regard the information about Maruiwi given by Whatahoro's informants as quite unreliable.

It is necessary to speak plainly in this matter because the Maruiwi myth has taken firm hold on Maori history, and appears as the background of what may otherwise be regarded as definitive histories of districts which comprise fully half of the North Island. Not only has it been adopted in New Zealand, but it has influenced the work of well-known writers overseas. Further, the demonstration that one part of "The Lore of the Whare-Wananga" is unreliable must affect our judgment as to the reliability of the rest of that work.

It should be added that there are vague tales among the Maoris of Banks Peninsula that the Chathams were colonized from that district.⁴ While these stories are in themselves unconvincing, geographical considerations render colonization from the Peninsula much more likely than from Taranaki by way of D'Urville Island, as is claimed by Whatahoro's informants. Stack claims for the tradition the support of place-names, but this kind of evidence does not carry much weight. The fact that the Moriōris buried their dead facing due west believing that the spirit departed westward to the ancient homeland lends more substantial support to the claim.

⁴ Beattie, *Polynesian Soc. Jour.*, vol. 26, 1917. See also Potts, *Out in the Open*, p. 80; Jacobs, *Tales of Banks Peninsula* (2nd ed.), p. 3, quoting Stack.

THE PERIOD OF EUROPEAN EXPLORATION, 1791-1809

VISIT OF THE "CHATHAM"—REPORT OF THE CREW

European contact with the Moriori dates from the year 1791. Early in that year an expedition under the command of Captain George Vancouver left England, under orders to complete the survey made by Cook of the north-west coast of America. Running short of stores when passing south of Tasmania, Vancouver turned towards New Zealand and on the 2nd of November, 1791, dropped anchor in Dusky Sound. On November 21st, the "Discovery" and the "Chatham" sailed from Dusky Sound, their rendezvous being Otaheiti. Lieut. W. R. Broughton, commander of the tender "Chatham," shaped a course around the south end of New Zealand, discovered the Snares, and sailed north-east. In his log, which is preserved in the British Museum, under date Wednesday, November 30th, 1791, Broughton made the following entry:

At 2 saw the land bearing from N. E. to E. N. E. Hauled over wind. At 3 sounded in 40 fathoms. Hove to till daylight. At $\frac{1}{2}$ past 4 made sail. At 1 hoist the cutter and a party went on shore when the island was taken possession of by the name of Chatham Island. At 5 cutter returned and at 6 weighed and made sail.

In his journal, part of which was published by Vancouver in his general account of the voyage (2, p. 84), Lieutenant Broughton gives an extraordinarily full and accurate account of the discovery of Chatham Island and of his intercourse with the Moriori. The rarity of Vancouver's work and the importance of what Broughton says, from the historical and topographical as well as from the ethnographical point of view, justify its reproduction here almost in full.

Early on the morning of the 29th [November, 1791] low land was discovered, bearing by compass N. E. to E. N. E.; and being then in 40 fathoms water, we brought to till day-break. About 4 o'clock we had 38 fathoms sand and broken shelly bottom, when the N. W. point of this land, which is low, bore by compass S. 7 E. about 3 leagues distant, and which, after the man who fortunately saw it, I named Point Alison; a remarkably rugged mountain that obtained the name Mount Patterson S. 60 E.; a sugar-loaf hill S. 84 E.; and the extreme point to the eastward, which formed an abrupt Cape, N. 75 E. Two islands N. 3 E. to N. 5 E., 2 or 3 leagues distant. The interior land was of moderate height, rising gradually, and forming several peaked hills, which at a distance have the appearance of islands. From Point Alison to Mount Patterson the shore is low, and covered with wood; from thence to the above cape was a continued white beach, on which some sandy cliffs and black rocks were interspersed, apparently detached from the shore. To the eastward of these rocks, between them and a flat projecting point, the land seemed to form a bay opening westward. From this point to the above cape, a distance of about 2 miles, the cliffs were covered with wood and coarse grass. These cliffs are of a moderate height composed of a reddish clay mixed with black rocks. This Cape forms a conspicuous headland and is the northern-most part of the island; I called it Cape Young. Two islands I called The Two Sisters. The shore is a continued white sandy beach, on which the surf runs very high. Some high land, rising gradually

from the beach and covered with wood, extends about 4 miles to the eastward of the cape. After passing this land, we opened the several hills over the low land we had seen in the morning, and could discern that many of them were covered like our heaths in England, but destitute of trees. The woods in some spots had the appearance of being cleared, and in several places between the hills smoke was observed. After sailing about 10 leagues, we came abreast of a small sandy bay. With our glasses we observed some people hauling up a canoe, and several others behind the rocks in the bay. Accompanied by Mr. Johnston, the master, and one of the mates, we proceeded towards the shore in the cutter. . . . As (the people) approached they made much noise, and having soon joined us, we entered into conversation by signs, gestures, and speech, without understanding what each other meant. We presented them with several articles, which they received with great eagerness and seemed pleased with whatever was given them but would make no exchanges. They made no scruple of attempting to take whatever came within their reach. Perceiving them to be armed with long spears, we did not think it prudent to venture amongst them. Having reached the shore without an interruption, we displayed the Union flag, turned a turf, and took possession of the island, which I named Chatham Island (in honour of the Earl of Chatham) in the name of His Majesty King George III, on the presumption of our being the first discoverers. After drinking His Majesty's health, I nailed a piece of lead to a tree near the beach, on which we inscribed, His Britannick Majesty's Brig Chatham, Lieutenant William Robert Broughton, commander, the 29th November, 1791. And in a bottle secreted near the tree, was deposited an inscription in Latin to the same effect.

The canoes we examined were more in the form of a small hand barrow without legs, than any other thing to which they can be compared, decreasing in width from the after to the fore part. They were made of a light substance resembling bamboo, though not hollow, placed fore and aft on each side, and secured together by pieces of the same wood, up and down, very neatly fastened with fibres of some plant in the manner of basket work. Their bottoms flat and constituted in the same way, were two feet deep and eighteen inches in breadth; the openings of the seams on the inside and bottom were stuffed with long sea-weed; their sides meet not abaft nor foreward; their extreme breadth aft is three, and forward, two feet; length eight and nine feet. In the stern is a seat very neatly made of the same material, which is moveable. They appeared alone calculated for fishing among the rocks near the shore; were capable of carrying two or three persons and were so light that two persons could convey them anywhere with ease, and one could haul them into safety on the beach. Their grapnels were stones, and the ropes to which these were made fast were formed of matting, worked up in a similar way to that which is called French sinnet. The paddles were of hard wood, the blades very broad, and gradually increasing from the handle. The nets of these islanders are very ingeniously made, terminating in a cod or purse; the mouth was kept open by a rim, six feet in diameter, made from wood of the supple jack kind; the length from 8 to 10 feet, tapered gradually to one; they were closely made, and from the centre, attached to the rim by cords, was fixed a line for hauling them up. They were made of fine hemp, two strands twisted and knotted like a reef-knot, and seemingly very strong.

The woods afforded a delightful shade and being clear of undergrowth, were in many places formed into arbours, by bending the branches when young, and enclosing them round with smaller trees. These appeared to have been slept in very lately. On our return a few of the natives were seen approaching us, and as they appeared peaceably disposed, we joined

the first party, and saluted each other by meeting noses, according to the New Zealand fashion. They were presented with some trinkets, but seemed to entertain not the slightest idea of barter, or of obligation to make the least return, as we could not prevail on them to part with anything excepting one spear of very rude workmanship. On making a bargain with him who had parted with the spear, for his coat, or covering of sea-bear skin, he was so delighted with the reflection of his face in the looking glasses proposed in exchange, that he ran away with them. On firing my gun they seemed much alarmed at its report, and all retreated as we advanced towards them, excepting one old man who held his ground; and presenting his spear sideways, beat time with his feet; and as he seemed to notice us in a very threatening manner, I went up to him, shook him by the hand, and used every method I could devise to obtain his confidence. Observing something in his hand carefully rolled up in a mat, I was desirous of looking at it, upon which he gave it to another, who walked away with it; but who did not prevent my seeing that it contained stones fashioned like the Patoe Patoes of the New Zealanders. They seemed very anxious to get my gun and shot belt, and frequently exclaimed "Too-hata." Some of their spears were about 10 feet, others about 6 feet in length, one or two of them were new with carved work towards the handle; whenever these were pointed to, they were immediately given to those behind, as if afraid of our taking them by force. Finding little to be procured or learned here we made signs of going to their supposed habitations, and endeavored to make them understand that we needed something to eat and drink. As they continued very friendly, three men armed attended Mr. Johnston and myself along the water-side; the boat with four hands keeping close to the shore as we walked, lest we should require support or it should be necessary to retreat. Every one had orders to be prepared, but on no account to use their arms, until I should give directions, which, at this time, I had not the most distant idea would become necessary. When our little party first set off several of them collected large sticks, which they swung over their heads, as if they had some intention of using them. He who had received the stones from the old man, had them now fixed, one at each end, to a large stick about two feet in length. Not liking these appearances, we had some thought of embarking, but, on our suddenly facing about, they retired up the beach to a fire which some of them had just made. Mr. Johnston followed them singly, but was not in time to discover the method by which it had been so quickly produced. His presence seemed rather to displease them, on which he returned and we again proceeded along the beach, making signs of our intention to accompany them on the other side of the bay. Fourteen only followed, the rest remaining at the fire. Those who had not spears substituted the driftwood of the beach for their weapons; yet, as our party consisted of nine, all well armed, we entertained no fear for our personal safety, especially as everything had been studiously avoided that we imagined might give them offence, and the various presents they had received had apparently purchased their good opinion and friendship, until now that we had reason to believe the contrary by their providing themselves with bludgeons. Having walked about half round the bay we arrived at the spot behind which, from the masthead, inland water had been seen. As we proceeded up the beach we perceived it to be a large sheet of water, which took a western direction round a hill that prevented our seeing its full extent. At the upper end of this lake the country appeared very pleasant, and level. The water seemed of a reddish colour, and was brackish, which was most probably occasioned by the salt water oozing through the beach, which at this place was not more than twenty yards wide; or by its having some communication with the sea to the westward, which we did not perceive. We tried to explain to the natives who still attended us, that

the water was not fit to drink, and then returned to the sea side; when, abreast of the boat, they became very clamorous, talked extremely loud to each other, and divided so as to nearly surround us. A young man strutted towards me with a very menacing attitude; he distorted his person, turned up his eyes, made hideous faces, and created a wonderful fierceness in his appearance by his gestures. On pointing my double-barrelled gun towards him he desisted. Their hostile intentions were now too evident to be mistaken, and therefore, to avoid the necessity of proceeding to extremities, the boat was immediately ordered in to take us on board. During this interval, although we were strictly on our guard, they began their attack, and before the boat could get in, to avoid being knocked down I was reluctantly compelled to fire one barrel, which being loaded with small shot, I was in hopes might intimidate without materially wounding them, and that we should be suffered to embark without further molestation. Unfortunately, I was disappointed in this hope. Mr. Johnston received a blow upon his musket from an unwieldy club with such force that it fell to the ground, but before his opponent could pick it up, Mr. Johnston had time to recover his position and he was obliged to fire on the blow being again attempted. A marine and seaman near him, were, under similar circumstances, forced into the water, but not before they had also, justified alone by self-preservation, fired their pieces without orders. The gentleman having charge of the boat seeing us much pressed by the natives, and being obliged to retreat, fired at this instant also, on which they fled. I ordered the firing instantly to cease, and was highly gratified to see them depart, apparently unhurt. The happiness I enjoyed in this reflection was of short duration, one man was discovered to have fallen; and I am concerned to add, was found lifeless, a ball having broken his arm and passed through his heart. We immediately repaired towards the boat, but the surf not permitting her to come near enough, we were still under the necessity of walking to the place where we had originally intended to embark. As we retired, we perceived one of the natives return from the woods, whither all had retreated, and placing himself by the deceased, was distinctly heard in a sort of dismal howl to utter his lamentations.

As we approached our first landing place we observed no sign of habitations, although women and children were supposed to have been looking at us from the woods, whilst talking to the natives on our arrival. On tracing some of the footpaths nothing was discovered but great masses of ear-shells, and recesses formed in the same manner, with a single pallisade, as those seen on our first landing. We distributed among the canoes the remaining part of our toys and trinkets, to manifest our kind intentions towards them, and as some little atonement for the injury which, contrary to our inclinations, they had sustained in defending ourselves against their unmerited, unprovoked hostility. On our way to the ship, we saw two natives running along the beach to the canoes, but on our arrival on board they were not discernable with our glasses. . . .

We did not observe that their ears were bored, or that they wore any ornaments about their persons, except a few who had sort of necklace made of mother of pearl shells. Several of them had their fishing lines, made of the same sort of hemp with their nets, fastened round them; but we did not see any of their hooks. We noticed two or three old men, but they did not appear to have any power or authority over the others. They seemed a cheerful race, our conversation frequently exciting violent bursts of laughter among them. On our first landing their surprise and exclamations can hardly be imagined; they pointed to the sun and then to us, as if to ask whether we had come from thence. The not finding a single habitation led us to consider this part of the island as a temporary residence of the inhabitants, possibly for the

purpose of securing a supply of shell and other fish. The former of different kinds, were here to be had in great abundance: claws of crayfish were found in their canoes: and as the birds about the shore were in great number, and flew about the natives as if never molested, it gave us reason to believe that the sea furnished their principal subsistence. Black sea pies with red bills, black and white spotted curlews with yellow bills, large wood pigeons like those at Dusky Bay, a variety of ducks, small sand larks, and sandpipers, were very numerous about the shores.

These few observations conclude a brief narrative of our visit and transactions at Chatham Island; and I have to lament that the hostility of its inhabitants rendered the melancholy fate of one of their number unavoidable, and prevented our researches extending further than the beach, and the immediate entrance of the adjoining wood.

On our return to the vessel we got under weigh, with a fresh gale at S. W. About six in the evening, on passing Port Mannings, which is the N. E. extremity of the island, it was seen to be a low peninsula, over which from the mast-head, was discovered more land to the southward, but the weather became so hazy that it was impossible to discover how far it extended in that direction. From the bay, which I called Skirmish Bay, to Point Munnings, the shore is low, rocky and clothed with wood. Some rocks lie a little way off the point. The extent of the island in an east and west direction, which is nearly the line of the coast, was now considered to be about twelve leagues, allowing 14° east variation. At day-break the next day we made all sail as usual and pursued our way to the N. E.

A journal the writer of which is unknown, was kept on the "Chatham" during this voyage, and has been published by McNab (60, p. 496). The account of the Morioris and of the happenings on shore, which was supplied by Johnston, the master, is in considerable detail. As the ethnographical part will be quoted later under various headings, only that part which describes the dealings with the natives need be given here.

The natives who had quitted their station as soon as they saw us land now advanced hastily, and by their threats and gestures plainly indicated their hostile intentions, but rather than oppose their tumult we thought best to retire to the boat, where more in safety we might endeavour to engage their friendship. With the oars we kept her just afloat. They, without making the least stop, rushed hastily on, some of them up to their knees in water, brandishing their spears and clubs with much vociferation. They were only about 40 in number, which gave reason to conjecture that they were totally ignorant of the effect of our firearms, and only reckoned strength on the superiority of numbers. For some little time we had used everything we could think of to conciliate their friendship but without effect. At last their violence somewhat abated, and they received some presents which we conveyed to them on the ends of their spears which they held out for the purpose, for we did not yet choose to trust the boat within their depth. They now became to all appearances perfectly reconciled, and received everything which we offered with avidity, but amongst the articles, which were pieces of red cloth, helmets, beads, and nails, we could not observe that they gave the preference to any one more than another, and though they would not consent to make us the least return, yet they made no scruple, not only in receiving, but in snatching away everything they could reach at, and it was sometimes not without a little struggle that we could hold them fast. We had often applied by signs for something to eat and drink, with a wish to discover what their food consisted of, but we were not so fortunate as to succeed. They only answered by pointing to the

woods and to the opposite point of the Bay from whence we at that time concluded that their habitations were there. Mr. Sheriff stepped on shore to see if he could observe any of their huts, but as their behaviour was not altogether to his liking he soon returned, tho' they had forcibly detained him longer than he wished. But I do not think that this was done with any other intention than for a longer opportunity of gratifying their curiosity. As we saw clearly we could have no satisfaction in landing where we were, pulled down to the opposite point in the hopes of finding less obstruction, but on our arrival we found that though we had changed our situation we had by no means changed our company, for our new friends having kept away with our first motion and followed us along the beach as we rowed down, arrived at the same time. Here we saw on the beach the same kind of canoes and nets as we had observed before, but no appearance of any huts.

The disorderly behaviour of the natives having deterred us from landing at the place we quitted, we had no reason to expect that it would prove better now, so without entering into any further parley we quitted them, intending to row on board, and pulled up towards the weather point of the Bay, which they observed without shewing the least symptoms of either satisfaction or displeasure, remaining still on the beach where they had first sat down. Finding this to be the case we thought it a favourable opportunity for changing our intention of going straight on board and landing again at our first situation, which we did, and whilst we were free from molestation examined the skirts of the wood, where we found no other signs of habitations than a small circle of clear ground, sometimes fenced in by a simple palisade. In the centre of this circle was the mark of a fire place, and a great number of fish shells lay about, particularly the ear shell. This had no other covering than the growing branches of the trees.

We nailed to one of them a piece of lead written with the name of the vessel and the date of our arrival. We also buried a bottle with a paper enclosed written—*Navis Britann. Majest. Chatham, Gulielm Robertis Broughton, Princeps—29th November, 1791.* It was now called Chatham Island, the Union Jack was hoisted, and taken possession of in the name of the King. By the time we had made an end of these ceremonies a few of the natives had straggled towards us, and more were inclining the same way, but they all approached with cautious indifference. That they might place the more confidence in our friendship our people stayed behind whilst we advanced to meet them. At first they were rather shy, retiring back, but at last halted till I came up, and received me by saluting noses, the same as at the Sandwich Islands. Having made them some presents of nails they were soon perfectly easy, and were joined by more, some of our people coming in at the same time.

Though they took whatever we offered, yet so little did they esteem them that we could not draw from them anything in exchange. One spear with a small piece of rope, wrought in fashion of French sinnet, was all that we could procure. They would at first shew an appearance of making a return till they got in their hands what was offered—then would run off well pleased.

With the intention of giving them some idea of the effect of our muskets, Capt. Broughton fired at some birds; the first discharge gave them a good deal of alarm, though it appeared to have been the report that produced it more than anything else, for after the repetition they observed it with very little emotion, but often repeated the word "*Tohaua*." [According to Broughton, "*Toohata*."] Whether this was the name they called it by, or what else, I could not well determine.

We had now spent an hour in friendly intercourse, and nothing had transpired to give

us reason to suspect a change of it. Their number from what it was at first, had also greatly diminished, which we looked upon as a further security for their good behaviour. Considering these instances as favourable for visiting the East point of the Bay, which different appearances had before prevented us from, as also to examine a piece of water which we had observed to lay within the beach about the centre of the bay, Mr. Sheriff was directed with three of the people to pull down along the shore whilst with the other three I accompanied Captn. Broughton. We had proceeded but a little way when we first observed the natives forming rather hastily in a Bay by the edge of the wood abreast of us. I stepped towards them to see if I could discover the cause of the bustle. On my approach they hastened quickly within the verge of the wood, and quickly returned armed with clubs, preceded by one carrying a blaze of dry brush with which he presently made a great smoke by communicating this fire to more wood of the same kind.

Their intentions were now no longer a mystery, for they advanced brandishing their clubs in the most threatening attitudes. On this we thought proper to stop for the boat which had got aground where we left her, but she soon came up, and having her to pull abreast of us, we went on keeping close by the water's edge whilst the natives, though only 14 in number, followed us with the most menacing gestures, and often came so near as to oblige us to face about to check their coming within reach. When we came abreast of the water, which we wished to examine, we struck up the beach, and on tasting, found it to be exceeding brackish, having a brown marshy colour. Its surface was very nearly as high as the brink of the beach, which was about 8 or 10 feet above the level of the sea. It was found between two ridges of the land that was pretty high, and broke down rather steeply at this place, and lay towards the S. W. but in a winding direction, which prevented us from seeing its extent beyond a quarter of a mile. The natives who had stopped when we did, no sooner saw us returning towards the sea side than they pushed on, more violently than they had done before, particularly a youth who was the most forward and who appeared to encourage the others, whilst he kept swinging his club over his head and committing various gestures. It was now but too evident that they meant to make the attack, therefore, the boat was called to, and Mr. Sheriff desired to let go the grapnell and back in with the oars, while we, in hopes of intimidating them, kept our muskets pointed towards them and retreated backwards to prevent their getting between us and the boat. They still resolutely pressed on. Captn. Broughton who had his piece loaded with small shot fired at one of the most forward, but it did not in the least daunt their advance. Having now reached the water we were obliged to make a stand when they closed in. The first blow that was made at me I received on the musket, but with such force that it broke down its level. My opponent's club, from its size being rather unwieldy, fell to the ground at the same time, and gave me time to recover.

There was no alternative; I was compelled to fire. A little before and about the same time two of the people also fired. They were in a like situation, so I found after, for at the moment I was too much occupied with those that directly opposed me to be able to pay attention to any other object. The whole of them upon this discharge and a musket that was fired from the boat immediately fled. At first we felt the most pleasing satisfaction not only in finding that we had secured our own lives, but that in doing it we had not injured others. This pleasing contemplation was but of short duration, for before they reached the woods one of them fell on the beach. In hopes that some relief might be given to his wounds that probably were not mortal, with two of the people I went up for that end, but to my utter grief found him dead. The others had

made a stand by the skirts of the wood, setting forth loud cries. As we could not be of any service to the dead man, we immediately quitted the spot, which we had no sooner done than one of them came up to the corpse, but we did not see what they did afterwards, and as we were anxious not to give them any uneasiness by halting to observe, proceeded directly to the point where the boat was desired to go also, for she could not take us in where we were owing to a reef of rocks that lay along shore, and on which her stern had struck after letting go the grapnell. But at the time when this circumstance rendered our situation more critical we were ignorant of it. When we arrived we found no other kind of resistance at this point but what we had observed at the other. We saw none of the natives, though we were satisfied they were at no great distance by their cries, which we sometimes heard in the woods. Here, as at our first landing, the boats came easily to the shore amongst a good deal of seaweed. After leaving what trinkets we had remaining in the different canoes we quitted the shore and went on board. After we had gone we saw one man come to the canoes, the only one we had seen since we had left them after the skirmish.

VISIT OF THE "CHATHAM"—MORIORI ACCOUNT

Two versions of the Moriori account have been preserved, the fuller of the two being that of Shand (53, p. 87), who says:

He (Broughton) landed at Kaingaroa Harbour, or Skirmish Bay, as he named it, where the Morioris of the place came round in wondering amazement to ascertain what these strange creatures were. Noticing the sailors smoking, they remarked, "See Mahuika's fire proceeding from their throats." The rigging of the vessel they likened to *kupenga* (nets), and so forth, with many amusing remarks. The sex of these strange creatures puzzled the natives, and seeing the visitors were friendly, they touched and handled them. Ultimately some concluded that they were women, while some of the bolder spirits attempted to take hold of them and drag them off to their homes in the bush above the sea-beach. In order, apparently to put a stop to this the sailors fired to alarm them, on which they remarked, "Hear the crack of the kelp of their god Hauoro!" alluding to the report made by thrashing long arms of bull kelp on a sea-beach. Then, seeing another party coming up from the east of the harbour, the sailors fired, killing and wounding some of the Morioris, which scared them and they fled to the bush. Subsequently the Morioris relate that they thrashed severely those who took part in the mishap to the strangers. It appeared also that some had remonstrated with the others regarding their behaviour to the strangers. Later on a boat came to the shore and left some beads and other things as gifts, which the natives took only when the strangers had departed. The time of year when this happened was that of the maturity of the young of the sea-bird *kukuri*—November, as stated by Lieutenant Broughton.

Shand's account does not differ very materially from that given by the European discoverers, but this does not hold true of a second version that has been preserved. S. Percy Smith (56, p. 217) says:

I copy from my journal of March 28th, 1868, an account given me by some old Morioris living at Ouenga of Broughton's visit: "They say that the first vessel that arrived here came to Kaingaroa; it was commanded by Manu-katau (Broughton). The *taukeke*—for so they called

the Europeans on board—were constantly collecting the clothes, utensils, weapons, etc., of the Morioris. On one occasion a *taukeke* got hold of a net and wanted to take it away as a specimen, but the owner objecting, called his friends to his aid. The white man, thinking that violence was intended, shot the Moriori, whereupon the latter's companions decamped. Soon after a boat came ashore from the vessel and deposited on the beach a quantity of articles, such as blankets, shirts, tomahawks, etc. They then pulled out for some distance and waited. First one Moriori, then another, came forth from their hiding places and helped themselves from the heap on the beach. When those in the boat saw that all the things were gone, they returned on board, and sailed away and never returned. They call a ship "*pora*."

Some sixteen years passed before Chatham Island was sighted again. On May 16th, 1807, H. M. S. "Cornwallis," under the command of Captain Charles Johnston, sailed past the group at a distance of 12 or 13 miles. The islands lying to the south-east of Chatham Island were discovered and were named after the vessel. (53, p. 151.) The Cornwallis Islands included Rangiauria or Pitt Island, and Rangatira. Two years later is recorded the visit of the sealer "Pegasus," bringing Stewart, who made the first complete survey of the islands. Stewart's map was in use in the British navy and among merchantmen down to the year 1840, (53, p. 161).

THE PERIOD OF SEALING AND WHALING 1809-1838

With the visit of the "Pegasus" the period of exploration came to a close and one of exploitation set in. From the scanty shipping notes that have been preserved in the newspapers, in the Customs files, and in the archives of the Court of Justice at Sydney, it is evident that the group now became a recognized sealing ground. In December, 1817, the "Sophia," James Kelly master, having played a principal part in that attempt at "cutting out" which was one of the most exciting incidents in a turbulent time, is recorded as leaving Port Otago for the Chathams. In 1825, a Sydney newspaper reported that the sealing schooner "Henry" had lost three men by drowning at the Chathams, where, we may conclude from the context, the "Henry" had secured some or all of her "1,700 prime seal skins" (53, p. 263). Five years later we hear for the first time of whaling, when the whaler "Samuel" reports that she was attacked and plundered at the Chathams by the "Cyprus," a trader which had been seized by escaped convicts at Van Diemen's Land and was now scouring the seas (59, p. 84). The next recorded visit is that of the sealing brig "Tula," John Biscoe, R. N. Biscoe's journal is interesting as containing the first mention made since Broughton's visit, forty years before, of the native inhabitants of the island. On November 19th, 1831, Biscoe sent his boats ashore. They returned with three natives who expressed their willingness to remain on board.

Biscoe writes:

They were quite naked with the exception of a short mat over the shoulders which seemed to be used as a roof to them to turn the water off, as the moment they came on deck they squatted down like so many monkeys, and the mat being stiff stuck out something like the shell of a turtle. Added to this a strip of the same material passed under the crotch.

As Biscoe had no work for the three Moriors he sent them ashore. He landed on the smallest of the Cornwallis Islands where he found some pigs and a cat which must have been left by European traders. "Mr. Fell," he reports, "found some canoes hauled upon the large island. These islands abound in fern root and flax." He came on the wreck of a small vessel which he supposed to be the "Glory," lost there in January, 1827. He secured 7 skins from the 44 Rocks and 16 from The Sisters, from which we may judge something of the wholesale slaughter of seals that had gone on since the "Henry's" visit only six years before. For the Moriors the extermination of the seals had disastrous results which will be noted later, while in the history of European trade it marked the close of the sealing era. From this time on until the establishment of British Government, most of the vessels which called seem to have been whalers, sealers coming only at rare intervals. Dieffenbach in the year 1840 (5, p. 207) records the final extinction of the sealing trade.

The evidence set out above proves that in the twenty-six years which passed between Stewart's survey and the Maori invasion of 1835 there was constant intercourse with the Chathams by sealing and whaling vessels. On the analogy of other islands of the Pacific we should expect a fair amount of ethnographic material to have been taken away by ships' crews. Strange to say, not a single object collected in that period has been noted in any museum. Not a mat or net or spear or paddle has been preserved to show us what these things were like before the disastrous Maori inroad.

The rarity of Moriors articles may possibly be explained in part by the fact that the natives were not inclined to barter. Hunt (10, p. 34) speaks of them as a wild, solitary, and timid race, caring little for the "baubles and novelties so eagerly sought after by most uncivilized races."

MAORI INVASION IN 1835

The first contact of Europeans with different branches of the Polynesian race seems to have had the same effect in every large island group of the Pacific. Everywhere there arose a ferment, results of which were massacre and tribal war. Mariner's book has made familiar to English readers the nature of that ferment in the Tonga Islands, and its effects are well enough known in Hawaii, the Marquesas, the Society Islands, and in Fiji. Bloodier than any of these is the record set forth in Percy Smith's *Maori Wars of the Nineteenth Century*. The northern tribes, rapidly arming with musket and tomahawk, invaded the tribal lands of their southern neighbors, who in turn moved southwards till both islands were involved in fighting of the most ferocious character. These wars and the epidemics which preceded and accompanied them had two results, important from the point of view of the present work; first, the decimation and resulting demoralization of the South Island natives in the area which shows the closest relationship in material culture with the Morioris; and secondly, the similar fate which befell the Morioris.

The visits to Chatham Island of Pakiwhara and Ropata have already been mentioned. On his return to Port Nicholson, Pakiwhara described the island and its supplies of food in exaggerated language and persuaded the Taranaki *hapu* [sub-tribes] who were then living on the shores of the harbor to set out on new conquests. In November, 1835, therefore, they seized the whaler "Lord Rodney," held her mate as hostage, and compelled her captain, Harewood, to take aboard a large number of natives and supplies to be carried to Chatham Island. The "Lord Rodney" left Port Nicholson on November 14, 1835, with about 500 Maoris on board, principally women and children. On the 17th she landed them at Whangaroa, Chatham Island, and attempted to escape, but having tacked about Petre Bay during the night until her sails carried away, she was forced back to Whangaroa. Thence she returned to Port Nicholson, where she took on board seven canoes from 35 to 60 feet long and about 400 Maoris. With these Harewood returned to Chatham Island, landed them, and left finally on December 5th, having completed his forced expeditions.

At this point Shand's account (51) may be resumed:

Arriving at Whangaroa, the first batch, as soon as they recovered from their trip, set out in all directions to take possession of the island, so that on the arrival of the second shipload the land had all been secured, leaving the second lot to live with their friends. Owing to this, dissatisfaction arose, and a number of them arranged with a brig to take them to the Auckland Islands in or about 1843, where most of them stayed till brought back by their friends in the "Lallah Rookh" many years after.

Shand speaks of the cruel, even brutal, treatment meted out to the Morioris by their Maori conquerors until 1868 when all but 20 of them returned to Taranaki.

The advent of Christianity in their midst was the first alleviation of the lot of the Moriori, when they no longer stood the risk of being killed. In 1855 the arrival of a Resident Magistrate prevented ill-treatment as formerly, and they gradually got their freedom, although reluctantly conceded in some cases, but by 1863 it was finally terminated. Finally, in 1870, reserves were allotted to them, which they have occupied ever since, and on which they are fairly comfortable.

On April 4th, 1842, Queen Victoria had issued letters patent enlarging the boundaries of the Colony of New Zealand to include the Chatham Islands.

Anyone who carefully scrutinizes the evidence must conclude that the commonly accepted verdict of unmitigated barbarity on the part of the Maori conquerors is not justified. A conquest in which two hundred out of a population of sixteen hundred were killed, does not, judged by European standards, connote exceptional ferocity, even less so, when the narrow confines of Chatham Island are considered. Nor can nineteenth century civilization which achieved the extermination of the Tasmanians afford to assume a righteous pose in recounting the misdeeds of the neolithic Maori.

NATIVES OF THE CHATHAM ISLANDS

THE NAME MORIORI

The designation usually applied to the natives of the Chatham Islands, and the form used by all the older observers who worked among them, is Moriori. This is the form used by Hunt, Shand, Welch, Deighton, and S. Percy Smith. Travers also used it in his paper of 1870, but in 1876 he used Mori-ori, a form which is without authority but in which he has been followed by several later writers. Of the other variants "Maioriori" appears to be supported by the greatest weight of authority. This form appears to have been published first by Mair (16) who speaks of "the Chatham Islanders, or Morioris, or, more correctly, Maiorioris." I am informed by Archdeacon Herbert Williams that his father, who visited the Chathams with Bishop Selwyn in 1857, recorded that the natives called themselves *tangata Maioriori*, and Archdeacon Williams says that this form had the support of the late Robert Shand. Bishop Selwyn (9), speaking of his visit in 1848, says the islanders called themselves *tangata Maoriori*, "differing from the name of the New Zealanders only in the reduplication of the last syllables."

The three forms noted—Moriori, Maioriori, and Maoriori—are reported on the authority of the islanders themselves. T. Whatahoro in his writings has now provided statements based on Maori authority. His informants state that the form Mooriori is incorrect, that the form Moriori was given to the islanders in error by the Maori invaders in 1835, and that the correct form is Mouriuri. To these statements it must be replied that (1) the form Mooriori does not appear in the records of observers of the islanders; (2) the assertion that the name Moriori was given in mistake by the Maori invaders is supported by not a shred of evidence; (3) the form Mouriuri is not recorded by any person who has worked among the islanders.

After consideration of these facts, the form Moriori has been adopted in this work.

PHYSICAL CHARACTERISTICS

It has been claimed that the earliest inhabitants of New Zealand were of Negroid stock, and that this earliest stratum is represented in its ancient purity by the Morioris. As the physical characteristics of the Morioris have thus become important theoretically, it is thought best to quote in chronological order all the more important accounts of them that we have.

Broughton (2, p. 91), describes the Morioris as follows:

The men were of middling size, some stoutly made, well-limbed and fleshy; their hair, both of the head and beard, was black, and by some worn long. The young men had it tied up in a knot on the crown of their heads, intermixed with black and white feathers. Some had

their beards plucked out; their complexion and general colour is dark brown, with plain features, and in general bad teeth. Their skins were destitute of any [tatu] marks, and they had the appearance of being cleanly in their habits.

In the journal published by McNab (60, p. 506), the following description is given:

We saw no perforation either in their ears, nose or any other part of the body, nor any ornament except some few who had a small piece of bone hung round their neck with several parts of small twisted hair. They were of a middle stature, with straight black hair, which some wore tied in a bunch on the top of their head whilst others suffered it to hang down loose in its natural order about long enough to reach the shoulders.

Dieffenbach (5, p. 195) says:

The sealers who first visited the islands—and I met some who had been there ten years ago—found the natives numerous and healthy, in number at least 1200, and they were received by them with a hearty welcome. Not ninety now survive in the whole group. They have a darker shade of skin than the Maori, but this is by no means universal, as individuals may be found as light in skin as the former; and the deeper hue of the Chatham Islanders may be in great measure attributed to their greater exposure and still greater uncleanness. They have often short necks, thick heads, and when young, prominent paunches; the forehead is often low and sloping, the cheek-bones prominent, the eye narrow, the nose flat and clumsy. Whether straight or curled, all have black, glossy hair; their eyes are of the same colour, and their teeth white and regular, but they have generally a downcast look. Some of the men have well-proportioned forms, and are handsome. They are Polynesians and not Papuas and their present state of degradation may be attributed to the miseries which they suffer from the oppressive sway of the New Zealanders, and to want of sufficient nourishment. They are the labourers and porters of their masters, who have no notion of anything like moderation in the labour they exact; so that ulcerated backs bent almost double, and emaciated paralytic limbs with diseased lungs, are the ordinary lot of these ill-fated wretches, to whom death must be a blessing. An excess of toes, so as to have six or more on each foot, is not very uncommon.

Hunt (10, p. 34), who settled on Pitt Island in the 'forties, says:

Somewhat akin to the Maoris in manners, customs and language, but totally devoid of their energy, intelligence and ferocity, they are a people of middle stature, with almond shaped eyes and hooked noses; indeed they bear a most remarkable resemblance to the Jewish race.

In another place (p. 28) Hunt says that they have "no darker tinge than a Maori."

Davis (15, p. 107) states on the authority of Welch that the hair is black, and that the color of the skin is No. 42 or 43 of Broca's "Tableau Chromatique." The color of the eyes is No. 1 or 2, the albugineae being yellow.

S. Percy Smith (55), who spent thirteen months on Chatham Island in 1867 and 1868, makes the following observations:

There are differences [between various branches of the Polynesian race] especially where the environment differs much. For instance: the Moriori people present some differences in physique from the Tahitians, who are as a rule taller, fairer and better looking. In

their happy isle nature provides for most of their wants with very little aid from themselves; the breadfruit, cocoanut and banana grow and produce abundantly, whilst fish is abundant and good. The heat of the sun is tempered by the perpetual shade in which the people live, making them fairer than the average members of the race. The Morioris, on the other hand, lived a hard strenuous life, without any vegetable food beyond fern root and a few indifferent fruits, whilst their island is more open to the sun. The products of the sea were their principal articles of diet, and to secure these they led a wandering life, camping for a time wherever food was most plentiful, and in their daily lives frequently exposed to boisterous weather. The exposed positions from which they obtained their food, the cliffs and rocks of the sea-shore, ever subject to strong saline winds, made the people weather-beaten, and darker than the race generally.

T. H. Potts (22, p. 160) thus describes a Moriori who visited Christchurch:

The Moriori was robust in figure, tall of stature, not darker, perhaps, than many a Maori, but of a dull dusky hue, rather than of the rich brown that distinguishes a great proportion of the natives of New Zealand. The brows were prominent, the eyes of an almond or elliptical shape, whilst the somewhat fleshy nose was curved with a fullness of form that is characteristic of the Jewish people. A full-face view was especially favourable for noticing the look of the eyes, which showed a contemplative watchfulness. This quiet individual of stolid demeanour proved an excellent sitter before the camera, and some excellent negatives were taken.

It should be noted that in the portrait accompanying Potts' description the lines of Maori *moko* are shown about the mouth, proving either that a Maori portrait has been substituted by mistake or that the Moriori negative has been falsified.

E. Tregear, who visited Chatham Island in 1888, says (26, p. 75):

The Morioris are on the whole, slightly shorter and broader than the Maori, but the hooked nose sometimes seen on the Maori face, especially in the north, is here very common, and in some cases, exaggerated to portentous dimensions.

Shand's account (56, p. 2) is much fuller than any of the others. He says:

In complexion, the Morioris bear a strong resemblance to the Maoris; in the aggregate they are, if anything, a shade darker; their features also strongly resemble the Maoris, but have, perhaps, more of a Jewish cast than even that people, their noses often being strongly hooked. Their eyes are of a dark-brown colour, sometimes black, but never light-coloured. The expression varies much, but generally it is dull, with an absence of vivacity, though in many cases they are full of fun. Their eyelashes are black, as also are their eyebrows, which are straight, like the Maoris—never oblique. The hair is black and coarse, and either straight and lanky (*mahora*), or slightly curled (*uru mawe*). In a few instances the hair was of a reddish tint (*uru kehu*), in which also they resembled the Maoris, who gave the same name to that description of hair. Both men and women wore the hair long, reaching to the neck, as the Maoris sometimes did. The men wore a top-knot (*hou*), in which the hair was gathered together in a bunch on top of the head and bound with a string. The teeth of the Morioris were brilliantly white, like the Maoris'; but in many of the skulls they are seen to be very much worn down, probably through eating the tough shell fish called *Pana* or *Haliotis*. The stature of the Moriori was, on the whole, somewhat under that of the Maori; but many men were well built, active, and strong, whilst at the same time there were many amongst them of a

diminutive stature. There appear to have been two tolerably distinct types—the straight-haired fairer people, and the curly-haired darker people, more approaching the Melanesian type. Like the Maoris, their hands were well-shaped, especially amongst the women. The feet were large, and the soles hard and horny from never wearing any covering, and the heels sometimes in old people much and deeply cracked. The skin of their legs was mottled and scaly The ordinary mode of sitting appeared to be the same as with the Maoris (unless adopted from them), with the knees doubled up and the body resting on the heels.

In an account written some years later than this one, and quoted at p. 39, Shand lays greater stress on darkness of complexion and frizzy hair, comparing them in this respect with the Fijians.

One of Shand's illustrations (56, p. 31) (much better reproduced in Poll's paper) shows a mature Moriori woman of little more than Pigmy size, and Shand says, "There were many among them of a diminutive size." This shortness was probably due to privation.

The evidence as to Moriori physical characteristics which I was able to collect from settlers of the group is as follows: Mr. Odman, of Waitangi, told me that when he came to the group in the 'sixties there were a number of Moriories alive, and though rarely tall they were, on the average, extremely big people. He could remember only one who would weigh less than fourteen stone. His impression of unusual size was confirmed by other settlers. Mr. R. McClurg told me that most of the Moriories he remembered were like Maoris, but that there were some that he could scarcely have distinguished in features from old, smoke-dried Irishmen. Many years ago the late Alexander Shand told me that the Moriori men were broad-shouldered, deep-chested, and of great physical strength.

On December 20th, 1919, I rode to Manakau and visited the two surviving Moriories, Thomas Solomon and his aunt. Solomon is of medium height, deep-chested, and stout (See Pl. I B). He has a brown complexion, black eyes, a well-shaped straight nose, good teeth, and straight black hair. He appears to be in every respect a typical Polynesian, more so, in my opinion, than the average Taranaki Maori, and might easily be figured as a native of Tonga or Tahiti. He is very intelligent, speaks excellent English, and is a member of the local school-committee. He lives in a well-built house of modern design, and farms his own land. I also visited his aunt, who speaks Maori and knows no English. Her complexion is brown, with a very distinct ruddy tinge on the cheeks, much like many Maori-European half-castes. I have not seen anything approaching this ruddiness in any pure Maori, and I would have attributed it to a European strain had I not been assured the contrary. Her teeth are extremely prominent, her nose is well formed, her hair is coarse, and black, and is curled into loose ringlets. She remained seated, with legs crossed in the usual Polynesian manner, throughout my visit. She appeared of average height and stout. She wore glasses, and was reading when I entered. I was informed by a European neighbor that she was a good business woman, standing by her word, very reliable, though perhaps a trifle keen.

The portraits and groups (Pls. I and II) afford us no information as to

color of skin or eyes, but they are of importance in forming a judgment as to features and cast of face. Unfortunately there is only one side-face shown, so that we cannot test the statement that curved noses were common. The curved, so-called "Jewish" nose is undoubtedly part of the ideal of masculine beauty in widely separated areas of the Pacific and is often strongly emphasized in masks, for example in those of New Ireland and New Caledonia. It appears also in one of the types of wooden figure from Easter Island. If it should ever be possible to associate racial characteristics with culture elements in the Pacific, this character will probably prove to be one of them. Tapu (Pl. 11, B), the last of the native chiefs and much the best known of all Morioris, had the strongly curved nose and it is possible that this characteristic, possessed by one so well known has unduly influenced observers in estimating the frequency of curved noses among Morioris in general. If there is one feature more typically negroid than another it is a short nose, broad at the wings. This does not occur in any of the Morioris whose portraits are here reproduced. On this point Dr. Buck in a private letter writes

Among all the Moriori skulls measured by Scott and others, numbering about 72 in all, there is not one broad-nosed individual. For my 424 full-blooded Maoris, whilst the racial average [of the nasal index] is 75.9 (mesorrhine), there are 10.6% of broad noses. The Ureweras, from my few figures, have 27.2% of broad-nosed individuals. On the strength of a typical Negroid feature like that, the Morioris cannot possibly be more Negroid than the Maoris.

Dr. Buck discovered a full-blooded Moriori living among the Nga-Puhi at Dargaville, Northern Wairoa. (See Pl. 11 A, B.) He came to New Zealand with Ngati-Mutungu as a child and is now over seventy years of age. I have to thank Dr. Buck for the photographs of this man.

SUMMARY

At this point it is convenient to summarize the observations on physical characteristics that have already been set out.

Stature and weight.—Tregear's statement (26, p. 75). "The Moriori are, on the whole, slightly shorter and broader than the Maori," is confirmed by all other observers. When the stress of primitive conditions was removed they developed weight.

Hair.—The color is black, except that a few individuals have reddish (*urukehu*) hair, as is true also among the Maoris, where the same term was applied. In texture it was sometimes straight but more often slightly waved. There is a single reference to it as "frizzy."

Skin-color.—Welch places this as No. 42 or 43 of Broca's table. Potts, describing a single individual, says:

The Moriori was not darker, perhaps, than many a Maori, but of a dull dusky colour rather than of the rich brown that distinguishes a great proportion of the natives of New Zealand.

Hunt states that they are no darker than the Maoris. Shand describes them as in the aggregate, if anything, a shade darker than the Maoris. Mr. Percy Smith agrees, but attributes the greater darkness of color to sunburn and saline winds, while Dieffenbach suggests dirt as the cause.

Facial features.—The eyes were black. Two observers describe them as almond shape. The teeth appear often to have been irregular. The one character which has been suggested as distinguishing the Moriis from other members of the Polynesian race is the curved nose, often described by observers as "Jewish." Tregear says, "The hooked nose sometimes seen on the Maori face, especially in the north is here very common, and in some cases exaggerated to portentous dimensions." In most individuals, however, the nose appears to have been of the usual Polynesian type. Dieffenbach may perhaps be referring to a Melanesian type of nose when he says, "The nose is flat and clumsy."

The groups and portraits shown in Plates I and II confirm the impression left by a perusal of the descriptions of the various observers. The Moriis shown in them resemble the Maoris in general but exhibit considerable variation among themselves.

Comparisons with natives of other groups—Many of the observers who have been quoted compare the Moriis with natives of other parts of the Pacific. Thus Shand says (56, p. 2) that they bear a strong resemblance to the Maoris, and in another place he is more specific, likening them to the Urewera mountaineers. Hunt says they bear a most striking resemblance to the natives of Stewart Island. Welch's statement that he could distinguish one Moriori among a hundred Maoris is in absolute contradiction to his own earlier statement, and to the whole weight of evidence. Travers (11) states that the Moriis resemble the natives of Rarotonga, but this is denied by Welch. S. Percy Smith contrasts them with the natives of Tahiti, concluding that they are darker and that this is due to environment.

When comparisons have been made at all, they have, with only one exception, been made with Polynesians. Dieffenbach is explicit on the point that they are not Melanesians. The one case in which the Moriis have been compared with Melanesians is a late one by Shand. He says (51, p. 145):

There appears little doubt that New Zealand, prior to the arrival of the "historic canoes," was peopled by a former migration of the same race. Whether the Moriis were a branch of this former migration or not is difficult to decide. In connection with this it may be worthy of remark that during the stay of the Hauhau prisoners at the Chathams many of the last batch came from Tarawera, Te Whaita, and thereabouts, while several of their women were almost the

counterpart of the Moriori in physique, but more particularly noticeable in the frizzy, semi-Fijian style of hair.

OSTEOLOGY

The earliest comprehensive work on Moriori osteology is that of Scott (79, pp. 1-64). An examination of a large number of Maori crania led Dr. Scott to the following conclusion (p. 62):

If any further proof were needed of the mixed origin of the Maori race it is given in this paper. An examination of the cranial indices and of the extent of their variation shows this clearly. These demonstrate two distinct types and intermediate forms. At the one extreme we have skulls approaching the Melanesian form, as met with in the Fiji group, long and narrow, high in proportion to their breadth, prognathous, and with wide nasal openings. At the other are skulls of the Polynesian type, such as are common in Tonga and Samoa, shorter and broader with orthognathous faces. And it must be noted that these extreme forms do not belong to different tribes or districts, but may both be found in one.

On comparison of thirty-four skulls from the district north of Auckland with forty from Canterbury and Otago Scott concludes that the Melanesian element is stronger in the north. He continues:

The measurements now given of the Moriori skull taken with those already published, show it to be mesaticephalic, though close to the lower limit of the group; metriocephalic, though almost tapeinocephalic; low down in the megaseme group; leptorhine; orthognathous; brachyuranic; phaeozygous; and the males to be megacephalic.

It differs from the Maori skull mainly in its lesser height, both absolute and relative to length and breadth; the greater excess of the parietal over the frontal width; the higher orbits; and the narrower nasal opening. The depressed and retreating forehead is also a very marked feature of many Moriori skulls. It is slightly broader, relatively to its length, and somewhat more prognathous. The cranial capacity is also somewhat less. But, as already pointed out, there is often a very close resemblance between Maori and Moriori skulls.

The variation of the indices, though somewhat more restricted than with the Maoris, is still considerable, and points, like the traditions of the people, to an origin from the two great Pacific stocks.

After investigating ten Moriori crania and two skeletons collected by H. A. Travers, and now in the anatomical collections at Cambridge, Dr. W. H. L. Duckworth concluded that

Whereas the members of this series of ten skulls are very generally alike, they agree particularly in presenting a combination of features much more suggestive of an affinity with a Polynesian than with a Melanesian physical type. Thus the breadth of the cranium is distinctly greater (relatively) and the parietal eminences are more outstanding than is the case in typical Melanesian crania; the cranial capacity, however, does not afford a means of discrimination, though it is slightly in excess of the average value obtained from Melanesian series, the crania being in fact of moderate size. A striking feature which they share with typical Polynesian crania is a rounding off of the angle of the mandible, whereby the estimation of the value of that character in degrees is rendered more difficult than usual. The glabellar promi-

nence is in few cases well developed, and herein, again, the affinity is with crania of Polynesian rather than of Melanesian origin. Symmetrical flattening on either side of the sagittal suture gives rise to a very distinctly pentagonal appearance in *norma occipitalis*; this has already been recorded as a characteristic of a Mori-ori skull described by Hyrtl (quoted by Turner). There is no case of a fronto-squamous articulation at the pterion, although in several cases epipteric ossicles are seen.

Finally we may mention two classes of abnormalities, the first of which might be described as adaptive, though its real significance is not quite clear. It consists in a tendency, which is quite marked among these skulls, to the production of bony paracondylar processes on the occipital bone. In the second class the variations are pathological and consist in extreme attrition of the teeth together with a sort of dislocation so that the surface of the roots comes into play in the alveolar plane. Many cases of alveolar abscess were indicated by the condition of the tooth sockets. And finally, the frequency of the ravages of osteoarthritis in the bones of the skeleton is very marked; Dr. H. A. Forbes of Liverpool, confirms this observation from the inspection of skeletons actually in the Chatham Islands, and the skeleton of a Chatham Islander in the Dresden Anthropological Collection presents unequivocal evidence of the existence of this condition.

The investigations of Eveline Y. Thomson⁴ have resulted in a mass of measurements of Moriori skulls, but the writer's deductions are vitiated by her ignorance of comparative human anatomy.

Dr. H. Poll⁵ says, "It is impossible to distinguish a Moriori from a Maori skull, and this is in striking contradiction to Welch who states that it is possible to distinguish one Moriori from among hundreds of Maoris." But as a series Moriori skulls form a characteristic sequence and could at once be picked as from one locality.

Meso-orthocephaly in Polynesia (apart from New Zealand) is characteristic of 2.5 per cent. of the population. In Melanesia the percentage rises to 3.5, and in New Guinea to 4.5. It is said to be characteristic of the Tasmanians, and not to occur at all in Australia. As meso-orthocephaly is very characteristic of the Mori-ori, Poll regards them as more nearly allied to the Tasmanians than are the other natives of the Pacific.

Dr. G. Elliot Smith regards the Moriori skull as exhibiting Armenoid characteristics.

MENTAL AND MORAL CHARACTERISTICS

Broughton (2, p. 91), describes them as a cheerful race, "Our conversation frequently exciting violent bursts of laughter among them."

When Dieffenbach visited Chatham Island the Mori-ori had been enslaved by the Maoris. His description (5, p. 195) is as follows:

Almost all I saw were living in miserable huts in the open fields; their disposition is morose and taciturn, and it was with difficulty that I could gain their confidence; but, after I

⁴Biometrika, 1915, p. 82.

⁵Zeitsch. Morph. u. Anth. Bd. V., 1903.

had succeeded in doing so, I found them not at all deficient in intellect, and naturally cheerful. (5, p. 195.)

Shand says (56, p. 3):

The Morioris do not appear to have had the same amount of energy and vivacity as the Maoris, nor were they an aggressive or war-like people, although somewhat quarrelsome among themselves, caused chiefly by curses (*kanga*) of one section or tribe against another, which generally originated in the infidelity of the wives. To obtain revenge for this, they organised expeditions (*ka rangi i tauu*, Maori *taua*) against their adversaries, in which they went through and recited incantations for the success of their party, just as if in actual warfare. All fighting, however, had been forbidden, and had ceased since the days of their ancestor Nunuku (contemporary with the first immigrants in the Rangimata canoe), shortly after their arrival in the island about 27 generations ago, since which time they have been restricted to the use of the *tupurari* (quarter-staff) only. It was ordered by Nunuku that man-slaying and man-eating should cease forever—"Ko ra patu, ko ro kei tangata me tapu toake"—and that in all quarrels the first abrasion of the skin, or blow on the head or other part causing any blood to flow, was to be considered sufficient, and the fight—so-called—was to cease. The person sustaining injury in such cases called out, "*Ka pakaru tanganei upoko*," "My head is broken"; but, although the quarrel ceased for the time, it did not prevent the injured party endeavouring at a later period to get satisfaction for his "broken head." Nevertheless, apart from such disturbing incidents, their general life was a very peaceable one.

The Moriori account of their own peaceable disposition, set out by Mair and Shand, has been generally accepted, but is hard to reconcile with their traditions which are full of accounts of fighting, and with the accounts of their warlike behavior given by Broughton and Johnstone, the first Europeans to land on Chatham Island. As Broughton's report is given above it need not be repeated here. Johnstone's account, the greater part of which is also given, confirms it in all respects; Broughton had sailed with Cook, and appears to have assimilated completely his great commander's humanity in all his dealings with natives. The sole ground for doubting the English versions is that they conflict with the Moriori account of their own peaceful character. We know that when Shand and Mair began to work among the Morioris their spirit had been completely broken by their Maori conquerors. It would be easy for them to attribute their defeat to peaceableness, a virtue to which their conquerors could lay no claim, and it may be that in such circumstances their own virtue was unduly stressed.

As to intellectual and business ability we have little information. It is the fact, however, that the two surviving Morioris are the equals, in these respects, of the most prominent Maoris in the group, and that Thomas Solomon has been elected to the Owenga School Committee in a constituency that is principally European.

The discoverers record here, as elsewhere in Polynesia, that the natives were inveterate thieves, and many tales are still current among the Maoris at the

Chatham Islands to the same effect, tales which have almost invariably a grim ending.

LANGUAGE

To Archdeacon Herbert Williams (64, p. 415) is due the only comparative study of the Moriori language. He says:

Moriors appears to be farther removed from Maori than the dialects of many islands of the Pacific. Peculiarities of both grammar and vocabulary make the language more difficult for one conversant with Maori to read than Rarotongan, and not less so than that of Tahiti, Uvea, or Niue. Structurally, the dialect is exceedingly plastic, and affords example of letter change in bewildering variety. In some cases the metamorphosed word has wholly displaced the form in which it appears in Maori.

After an examination of all available material Archdeacon Williams concludes:

The only conclusion we have succeeded in establishing is the negative one that the Moriori tongue is not correctly described as "a sub-dialect of New Zealand Maori." So far from that being the case, it has as much right to be considered independent as any of the known dialects of the Polynesian language.

This is a weighty judgment, coming, as it does from the greatest authority on Maori linguistics, and it is with diffidence that I suggest a possibility not considered by Archdeacon Williams. Our knowledge of Maori dialects is very imperfect. There exists, for example, no study at all of the Kai-Tahu dialect of the Canterbury and Otago Maoris, which is known to differ widely from dictionary or northern Maori. In phonetics, for example, it has the "l" sound (as in *Wai-hola*), the "g" sound (as in *mogihi*, *Katigi*), the "k" sound in place of northern "ng"—(for example, northern *Waitangi*, southern *Waitaki*, compare Moriori *Waiteki*)—and other variations less susceptible of graphic representation. In this phonetic variability it thus exhibits a characteristic which is apparent in Moriori. In grammar, the Kai-Tahu dialect uses the east Polynesian causative prefix *hoko* in place of northern *whaka*, and in this respect also it agrees with the Moriori dialect. As regards vocabulary we are on less certain ground for no vocabularies of Moriori or Kai-Taku have yet been published. But the researches of Mr. H. Beattie have shown that even now, after a century of intercourse and eighty years of education from texts composed in northern Maori, there still are used in southern New Zealand a number of words which are not found in the north. It is thus not improbable that further investigation will show a closer relationship between the Moriori and Kai-Tahu dialects than between Moriori and dictionary Maori. This is the more probable since, as will be seen later, the material culture of the Moriors is much more closely related to that of the Kai-Tahu area than it is to that of any other part of New Zealand.

SOCIAL LIFE AND ORGANIZATION

BIRTH AND BAPTISM

In a note to a Moriori story called "The Baptism of Rangihiki-wao," Shand (56, p. 147), says:

No mention is made of any name given to Hine's child nor, as far as I am aware, did the Morioris know anything equivalent to the well-known Maori incantation recited in Shortland's Maori Mythology and Religion; nor have they any incantation for the safe delivery of their women; with so many incantations on other subjects it appears strange no mention is made of any in this particular instance.

In the story it is stated that a house was made for Hine in which she was confined. The ceremony of baptism or cleansing, and removal of *tapu*, is described on page 58. Towards the close of the ceremony a tree was planted, symbolizing the strength and growth of the child. The full account of *tohinga* (baptism) given by Shand (56, p. 167) is in some respects the most interesting chapter in this book.

Hunt (10, p. 36) says that of all their customs the most cruel was to destroy every child that cried during its birth, as it was deemed an unlucky one. He states upon his first arrival a Moriori child was born during the night and that on inquiring for it the following morning he was told that it was a *tamaiti-tangi* (crying child) and had been destroyed before sunrise. He saw the body of the infant, crushed beneath a huge piece of rock.

Dieffenbach (5, p. 209) reports, on the authority of a sealer, that some of the male babies were emasculated by pressure of two stones, but if this practice had really existed it would hardly have escaped the notice of all other observers.

As to initiation ceremonies no information is available, but Shand states (56, p. 12) that history and traditions were taught in houses specially set apart, and it is hardly possible that those about to be instructed would make their first entry into such houses without some initiatory ceremony. It is probable that if such existed it was of the attenuated kind practised by the Maoris.

MARRIAGE

W. T. I. Travers (20, p. 21) says: "Polygamy was common among them, and it was usual for a brother to marry a deceased brother's wives." Polygamy is not mentioned by Shand, but he has preserved a reference to *hine 'ti*, or junior wives, in a *karakia* (invocation) referring to the cultivation of the *kumara* (sweet potato) (56, p. 65). Shand (56, p. 175) says:

Among the Morioris all matters or ceremonies relating to marriage are classed under the head of *tahu*, while the charms used by suitors to induce unwilling damsels or widows to yield to their suit were called *atahu*, also *e (he) taki*, an induction.

As a rule marriages were arranged by the parents and relatives of both parties, which when agreed to, all then joined in collecting the food to be eaten at the feast on the celebration of the marriage. This feast was called *hinakai*, nearly equivalent to *kai-hapainga* in Maori,

although not bearing exactly the same meaning. The food having been collected, the relatives of the bridegroom went through the ceremony of offering or presenting the food gathered to the relatives of the bride, who in their turn acknowledged it by returning the compliment. It does not appear, however, that it was accepted by either party, but was produced and eaten at the feast by all present.

Marriages (56, p. 3) took place amongst them—as far as can be ascertained—at much the same relative age as with the Maoris, the women arriving at the age of puberty at from 13 to 16 years. Large families are said to have been common, prior to the arrival of the Whites and Maoris; but, on the advent of the latter, all increase ceased, which was in all probability due to change of habits and to the fact of their becoming enslaved. Some of the Maoris said of the Moriŕis, "It was not the number we killed which reduced them, but after taking them as slaves, we frequently found them of a morning dead in their houses. It was the infringement of their own *tapu* [compelled by the Maoris] which killed them. They were a very *tapu* people." With both sexes, fidelity after marriage frequently sat lightly on them; perhaps more so than with the Maoris, because there was not the same dread of active retaliation. Marriages generally were arranged by relatives, and a feast made to celebrate the occasion.

The ceremony in connection with the celebration of a marriage (56, p. 176) took place in the evening, but the feasting commenced the next day, meanwhile the house had been swept and mats (*tukou*) spread in parallel rows lengthwise of the house, the fire being in the centre with a trap in the roof to act as a chimney to let out the smoke. Darkness having set in, and the friends gathered, the young pair were placed close together near the centre, and the friends formed a circle round them, some of them having first plaited a thin rope of *karetu* grass (a fragrant tall grass), which was called the *Kaha o Tane Matahu* (rope of Tane Matahu, or god of marriage), placed it round the shoulders of the pair as they sat and knotted it, forming a ring then called *henga* (circlet), upon which all present recited an *atahu* or chant.

This *atahu*, which is given at length by Shand, is very obscure in meaning, referring chiefly to the *urunga* or pillow, which was symbolic of marriage.

To signify thereby that they were man and wife after this was done all present joined in singing *ara-pehes* (marriage-songs) until late in the night, and even into the early morning, when, tired out, they went to sleep. The feasting commenced the ensuing day, but only at the regular meal-times, not indiscriminately, while portions were set apart for absent relatives at a distance and carried to them, so that all might participate in the feast. It is said that when a large supply of food was obtained the feasting was prolonged over some days.

The marriage of close connections such as first cousins was much disapproved of, and even when not so closely related, as in the case of second and third cousins, the others, to show their disapprobation of marriages between close relatives, sung a song by way of contempt, calling it *tivare* (incestuous).

There does not appear to have been anything equivalent to divorce, other than the neglect to the unfavoured wife when the husband was possessed of more than one, as shown in some of their songs (*karamihas*).

DISEASES

The only specific information on this subject is supplied by Welch (16, p. 102), who says:

From what I have been able to learn the Morioris appear to have suffered from but few diseases; the commonest being a pulmonary affection called *Mare-mare*, and diarrhoea, *tiko-tiko*. They were also troubled with a virulent form of scabies, called *haki-haki* or *tiroliti*, which is a really loathsome disease, aggravated very much by the determined scratching which they persisted in to allay the intolerable itching. During my residence among them I was particularly successful in the treatment of this disease; and it was a common saying amongst them, "*Taguta kipini te Atua*," which means "Doctor all the same as God."

Welch describes his method of treatment, and continues:

Since the Maoris and white men have been among them they have, however, been subject to other diseases, some of which, particularly the measles, have been very fatal to them, as also to the Maoris. I never saw a case of syphilis or gonorrhea among the Morioris; but have treated both in Maoris. With these few exceptions I believe the Morioris to have been a fine healthy people.

METHODS OF DISPOSING OF THE DEAD

Judging by the accounts of reliable authorities, the methods used by the Morioris in disposing of the dead were as follows: (1) Burial upright against a tree, (2) partial inhumation sitting, (3) complete inhumation sitting, (4) launching to sea, (5) burial in coffins, (6) cremation, (7) mummification.

1. Burial upright against a tree is thus described by Hunt (10, p. 36):

(Some) would be bound to two or three young trees growing closely together, in which case the body would be placed in an erect position, and bound round and round with vines, from head to foot, but always [facing ?] seawards. . . . In sawing across a karamu tree, to my great astonishment I found I had sawn through the hip-bones of a man. He had been lashed against the tree; it had grown and folded him in its embrace.

Dendy (44, p. 127) says:

At Wharekauri, Mr. Chudleigh's estate in the northern part of the island, I saw many bones lying beneath the trees in a dense thicket near the shore, and was informed that the Morioris sometimes tied their dead to the trees in erect postures with a stick in hand pointing upwards to represent a pigeon-spear, the bodies being tied with the stems of that curious climbing plant, the supplejack of the settlers (*Rhipogonum scandens*).

W. Travers (11, p. 354), who seems to have drawn his information from Hunt, says:

Their mode of disposing of their dead had special reference to the particular vocation or fancy of the living subjects. . . . If he had been a noted bird-catcher, he was fixed in a stooping position between two trees, facing the particular hill or other spot which he usually frequented.

2. Partial inhumation sitting is also referred to by Hunt (10, p. 35). He says:

Their modes of burial were various. While living they almost invariably selected their own spot for interment; sometimes on a high hill commanding a view of the sea, on some *Atua* rock, or in the vicinity of their food-yielding *nikau*; others were lashed to young trees, and

some were lashed in a canoe and sent to sea. The most common mode, however, was this: when a person conceived the approach of death to be near, he would select a long piece of the heart of *hake-hake*, about the thickness of a man's wrist and sharpened at one end. Upon the top he would rudely carve the figure of a bird or fish. He would then go to a particular spot and kindle a fire with brushwood. Where the fire had died out he would stick in the *hake-hake*, and that would be the place of his sepulchre. When dead, the arms were forced forward against the chest, and securely bound there with plaited green flax ropes; the hands were bound together and drawn over the knees, and a stick was then inserted between the arms and knees. This was the orthodox method. . . . The dead was enveloped in plaited flax matting, and interred as far as the knees, the upper portion of the body being invariably above the soil.⁶

W Travers (II, p. 355), describes this method as follows: "If he had had no particular vocation his body was put, in a sitting posture, into an open hole in the ground, usually about eighteen inches deep, with any favourite piece of carved wood stuck up before him." The carved wood of which Travers speaks is evidently the rudely carved figure of a bird or fish mentioned by Hunt, and probably referred to by Dendy (44, p. 130) when he says: "I was told by a lady on the island that she had found the figure of a shag carved on hard wood in a Moriōri grave." Welch's account (14, p. 100) differs somewhat from those of Hunt and Travers. He says: "Women, and those of no particular merit as sportsmen, were generally taken to some sandhill overlooking the sea, where a hole was made, into which the body was put doubled up, so that the chin rested on the knees, and the head was always left above the surface of the ground—a style of burial that I have not heard of being practiced by any other people."

3. Though the method of complete inhumation sitting does not seem to have been recorded there is no doubt that it was common. Miss R. Ritchie writes as follows:

When a native died all his implements were buried with him. He was buried in a sitting position facing the sea, his legs drawn up and his head resting on his hands and knees. I have seen quite a number like this: the wind would blow the sand away, and first the skull would become exposed, then the arm and leg-bones sticking up, and finally when all the sand was blown away the skeleton would fall down in a heap. It was among such a heap of bones that I found the whale's tooth ornament. (No. 43 Plate VII, h). Apparently it had been worn around his neck.

4. Launching to sea was practiced according to the account given by Hunt (10, p. 36):

Some noted fisherman, again, would direct that his bones should be consigned to the waves; in which case he would be lashed in a *waka-korari* or flax stem canoe, in a sitting position, as if in the act of fishing. A long flax line with a baited hook and a sinker attached, was suspended over the side, and when the wind or tide was favourable, he was launched to

⁶ Compare W. H. R. Rivers' account of the custom in the New Hebrides: *History of Society in Melanesia*, Vol. II, p. 539.

sea. . . . The first who should touch or see the body of a person whose death had been caused by accident or violence should abstain from food for three successive sunrises and sunsets. The arrival of a shoal of blackfish or sea-leopards was attributed to the spirit of some person lately dead.

5. Burial in coffins is described by Shand (56, p. 184):

The general custom was to bury their dead in coffins (*hakana*) if people of consequence; or if of common rank, without them, using the fern leaves to wrap them in as a covering. Many of their dead were buried around and quite close to their dwellings, as seen from personal observations. This hardly appears to have been the general custom, however, as the enormous heaps of skeletons on the various *tuahus* (heaps or mounds) testify, and it seems probable that such may have been the result of certain epidemics which visited them in more recent times, when the living, in sheer terror, fled, leaving the dead unburied. Another custom also obtained among them that after a death in a house the whole party left it for a considerable time—some months it is said—and did not return again until apparently all unpleasant feelings were at end and the place was safe from a sanitary point of view. The bodies of the dead were always placed in interment facing the west, as the way back to Hawaiki, where the spirits returned to, indicating thereby, no doubt, the direction from which the canoes came.

At the sandhills near the Waikawa stream is an old Moriori burial ground where, among the bones of scores of persons lie the battered remains of four coffins or bone-boxes, each carved from a single piece of wood. They are so old and weather-worn that it is difficult to decide the details of the original shape, but each had at one end a projection which may have been a handle. On the analogy of one type of bone-box from the Auckland district, it is more probably a peg. The length of these coffins ranged from 7 feet 6 inches to 5 feet 9; the maximum breadth from 2 feet 2 inches to 1 foot 7; the length of peg from 1 foot 6 inches to 3 inches.

There was no sign of a lid for any of the specimens. The opposite end from the peg appears to have been left open, though it was not possible to be certain on this point, and one box gave the impression of having originally been closed at both ends. If this were really the case it may be suggested that we have here a parallel with the San Cristoval custom of burial in an oblong food-bowl,⁷ which the Moriori bone-boxes resemble more than they resemble a canoe. This suggestion receives support from the fact that wooden water-vessels were called *hakana* (56, p. 111), and that coffins or bone-boxes were called by the same name (56, p. 17). None of the pegs appear to have been sharpened.

Shand also describes the canoe-shaped coffin: He says (56, p. 17):

They laced up their dead chiefs or people of rank in coffins hollowed out like a small canoe, with a lid, along the edge of which holes were made to permit of lacing up. These were called *papa* by the Maoris, and *hakana* by the Morioris. One of these Moriori *hakana* made of totara [*Podocarpus* sp.] may be seen in the Wellington Museum.

⁷ Fox, C. E., Social Organization in San Christoval, Solomon Islands: Anthr. Inst. Jour. Vol. XLIX for 1919, p. 176.

6. Cremation was another method of disposing of their dead, according to Shand, but was practised only by a section or tribe called Te Harua. "The spirits whose bodies were thus consumed never returned again to trouble the living as did the spirits of the people who were simply buried in the soil. The ashes were buried on the spot."

7. Mummification was also practiced. Shand (56, p. 184) appears to have recorded unconsciously the existence of the custom among the Moriōris. He says:

The Moriōris also had a custom of opening the bowels of the dead, for love, it was said (*manapou* or *manatua-pou*), but my informant in this case neglected to say what next transpired. In other cases they also sometimes suspended the bodies close to the roads leading out from their houses and even, it is said, inside their houses, scraping off the black mildew or decayed matter. This, however, appears to have been exceptional, and not to have been the prevailing custom, although possibly a modification of some ancient one partially adhered to.

When this statement is compared with Hare Hongi's account of mummification among the Maoris* it becomes highly probable that Shand has unconsciously recorded the practice here, breaking the continuity of his informant's statement in transferring it from his note book to his manuscript.

The following is Melville's account of mummification and suspension of the body within the house in the Marquesas as given in his *Typee* (p. 225):

The islanders understand the process of embalming, and practise it with such success that the bodies of their great chiefs are frequently preserved for many years in the very houses in which they died. I saw three of these in my visit to the Bay of Tior. One was involved in immense folds of tapa, with only the face exposed, and hung erect against the side of the dwelling. . . . The heads of enemies slain in battle are invariably preserved and hung up as trophies.

Whether this latter custom, which is common to Marquesans and Maoris, extended also to the Moriōris is not recorded, but it is twice narrated in their traditions that the head of the slain was brought back to his relatives. The children of Rei took the head of their eldest brother and returned in the canoe to their home, where it was shown to his relatives. (56, p. 68.) Ungima took the head and returned and gave it to the murdered man's father. (56, p. 6.)

Soon after my arrival at Chatham Island, and before I had mentioned the subject of mummification, a settler volunteered the statement that in the 'eighties a resident named Goodman found a mummified Moriōri body at Pitt Island. The body, stated my informant, was very shrunken but retained the hair and finger nails and it was sent to the Canterbury Museum. On my return I made enquiries at the museum but was informed that there was in the registers no record of such an object.

To the list of methods of disposing of the dead as described above must be added several others about which our information is less definite: cave-burial, burial

* Polynesian Soc. Jour. vol. 25, No. 4, p. 169.

among the rocks (*Atua pai* of Hunt), and deposition on the *tualu* (mounds). It is not known whether the body was laid out horizontally and covered with earth or whether it was placed in the sitting position.

This very great variety of methods of burial indicates as clearly as do the physical characteristics of the Morioris a diversity of racial strains.

TRIBAL DIVISIONS

The Morioris were divided into tribes, and each tribe exercised territorial rights over a definite tract of country. As agriculture was not practised these rights resolved themselves into exclusive privileges of hunting and fishing, and the right to all stranded matter such as whales or timber. The number of tribes and the extent of the territory of each have not been recorded, but as it is stated that the people for miles around would participate in the cutting up of a stranded whale, it is to be supposed that each tribe claimed a considerable area of country. Shand gives the tribal prefixes as *Etchi* or *Eti* (corresponding with Maori Ngati and Ati) and *Ei* (corresponding with Maori Ngai). He also records the following tribes as represented among the crews of the original canoes: Rauru, Wheteina, Poutama, Matanga, Harua, Etchi Ao, Ei Tara, and Makao, the last-named being divided into Makao-a-uha (senior female part) and Makao-a-to' (male part). Matanga and Makao are recorded as living at Pitt Island. These diverse tribal names seem to indicate diverse origins, and we know that their customs differed somewhat. Te Harua, for example, practised cremation of the dead, a custom never followed by other tribal divisions.

RELATIONSHIP AND SOCIAL ORGANIZATION

The terminology of relationship has not been recorded. In the traditions several references to relationship and social organization occur which are of great interest, but they are not numerous enough to be of real help. For example, Shand states in a note (56, p. 65):

It will be observed that Tamahiwa was a member of the Rauru tribe, and Tama-tehokapa one of the Wheteina tribe, but, although ostensibly of different tribes, it is very evident from each speaking of the other as parent, and also from the fact that they lived in close proximity to one another, that they were inter-related, and were, no doubt, the same people.

Can this be a dim recollection of the dual organization which underlies society in Melanesia? The fact that the two tribes were hostile does not invalidate the suggestion, for in the Banks islands such a state of hostility existed between the two moieties, and there are indications of a similar state in other groups.

In another tradition (56, p. 84), Tama, who belonged to the Rauru tribe, had

a sweetheart called Papa, or Tahu, who belonged to the Wheteina tribe. In speaking of her, his father made use of the word *tchuahine*, which appears to have been used to designate a sweetheart or a cousin. In the same story Papa's father is referred to as the parent of Tama, and this by Tama's own father.

Whatever these traditional references may mean, Moriōri social organization as it existed in the Chatham Islands was typically Polynesian. The land was divided among various tribes which were ruled by *ariki* or hereditary chiefs, who appear to have been regarded as heaven-born. Thus the saying: "*O tamariki ko te rangi*," which may be literally translated as "Your children are heaven," is equivalent to "Your children will be sufficient," assuming them to be of high rank or power. (See 56, p. 82.) The power of an *ariki* was never exercised by a woman, as not infrequently happened among the Maoris. The chiefly class were called *Rangitira*. The *Tohunga*, or priest, was the most able man of the tribe. The office was not hereditary, and it was sometimes held by the *ariki*. W. Travers (11, p. 354) says: "They had no hereditary chiefs; the most successful bird-catcher or fisherman, or any member of the tribe distinguished by extraordinary stature or by any useful quality, being looked upon as recognized leader." Welch (15, p. 100) has the following: "Anyone who was distinguished for stature or for prowess, or was a successful birdcatcher or fisher, was usually chosen as leader." It is obvious here, as elsewhere in Welch's work, that he had Travers' paper before him as he wrote, and it is impossible to decide whether the statement quoted should be regarded as based on his own experience at Chatham Island but expressed in borrowed phrases, or as a plagiarism. In any case we may conclude that in Hunt's time the *ariki* played so inconspicuous a part as to be quite overlooked by Europeans, who noticed no leader but the *tohunga*.

Social life had lost many of the features which are conspicuous in other parts of Polynesia. But in the tales and traditions many of these features are referred to as, for example, the *pa*, or fortified village (56, p. 125), the *marae*, or village square, the *ʻwahi tapu*, or sacred place (p. 143), the *pepe*, or public latrine (p. 87), and the *kainga*, which varies in meaning between eating place, dwelling place, and home (p. 67). The idea of *mana* also appears to have sunk into less prominence than elsewhere in Polynesia and Melanesia. More conspicuous than any of these was *makutu*, or witchcraft, which had the same relative importance among the Moriōris as among the Maoris. As there were no wars there were no slaves

DAILY ROUTINE

Shand's description of their daily life (56, p. 4) is as follows:

Cooking was carried on in huts distinct from the sleeping-houses, and these were *tapu* to the men. The meals were taken separately by the two sexes, as with all Polynesians, and were limited to two a day for the adults. The morning meal took place from 8 to 10 a. m., and the afternoon or evening meal from 5 p. m. till later on, varying according to the time of year. In years of plenty they had at times, in summer, three meals; but in years of scarcity, in winter time, only one meal a day. The houses (*whare*) and villages were built in sheltered nooks, either on the borders of or in the forest in suitable places—as a rule not far from the sea, whence they drew their principal food supply. Their villages were never fortified, nor was the *pa* of the Maori known—they had no occasion for fortifications, having no wars—a state of affairs unique, perhaps, among the Polynesian race. They kept seagulls (*karoro*), terns (*tara*), and Parroquets (*kakariki*) as pets. The people met in assemblies occasionally to discuss tribal affairs, or other matters of interest; but the speakers were not so demonstrative as the Maori, nor did they *taki* or run up and down whilst delivering an oration, as the Maori does. Anything of importance, affecting the tribe or individual, was published, in many cases, by composing and singing a song in reference to it. *Karikii*, or incantations, were used to ward off evil or witchcraft, or in the case of a stranger visiting a new place, or one at which he had not been for a long time.

The houses (see p. 74) were built in the shelter of the bush and usually near the sea. They were occupied during the winter, but in the spring they were deserted and their owners, having first ring-barked a number of trees which would serve as fire-wood on their return, set out to secure in rotation the various kinds of game and the scanty vegetable menu. The task of getting firewood was looked on as the most arduous of all. On the rare days of clear, hot sunshine the whole Moriori population would abandon work and sleep on some northward-facing slope, a custom which, I was assured, they followed till the very end.

Two methods of reckoning time are recorded. Dr. Cockayne (42, p. 253) who probably obtained his information from Alexander Shand, says:

When the sea-birds came to lay their eggs in the "clears" in the south of the island the Morioris would live in that part. So important was this article of food to them that they made a sort of rude calendar based on the period when one particular egg was most abundant. The egg season over, they would move about the rocky portion of the coast for fish, along the lakes and lagoons for eels, or they would visit those places where the holes of the mutton-birds most abounded; they would even visit in their large canoes the neighbouring rocks and islands in search of birds.

This mention of a calendar based on the laying seasons of the birds is interesting as affording a parallel to the Easter Island calendar elucidated by Mrs. Scoresby Routledge. It seems probable that they arose independently out of the similar circumstances of the two islands.

There was another, and presumably a more ancient calendar (Shand, 56, p. 202), obtained by ancestral heroes on the land of Irea, in which the year began in the first week of June with the rising of the star Rigel, and was divided into

twelve months. The days were reckoned by the nights of the moon, and there was a separate name for each up to the thirty-first.

PROPERTY

In general, private property seems to have been restricted to the articles on which individual labour was expended, such as implements, tools, garments, and ornaments. The sources of food supply were almost always owned communally, though Shand notes (56, p. 14) that there were "certain restricted individual rights to places where birds, fish, etc., were procured, which were transmitted to posterity, but not nearly to so great an extent as among the Maoris." It is likely that private wealth was a source of pride at the Chatham Islands as elsewhere, and it is probable the finely executed *patu* (weapons), too heavy to be of practical use, and the great adzes, far too large for use on the stunted timbers of the group, owe their existence to the love of ostentation.

As no example can be figured, the *tokotoko* (walking-stick or staff) may be mentioned here. In one of the stories (56, p. 70) we are told that when Apakura arrived on a visit Whakatau was already in the house. His staff (*tokotoko*) was in the open space before the house, and this was a sign that the owner was within.

FOOD AND COOKING

Shand (56, pp. 5-7), gives a very full account of the various kinds of food used on the group, and this is supplemented by Welch (14, p. 98), who gives a full description of the method of preparing the kernel of the karaka nut. Cooking was carried on by means of the familiar *kopa maori*, or Polynesian earth-oven, fire being procured by the fire-plough. Animal food was supplied by birds of which many kinds thronged the islands, by seals and carcasses of whales, by fresh-water fish, especially eels, by sea-fish, by every kind of shellfish, and by such vegetable products of the island as were edible. Of these last named none were cultivated, for the *taro* and *kumara*, introduced by the first immigrants, would not grow and were remembered only in tradition. Fernroot, and the kernel of the *karaka* nut, were prepared in exactly the same way as in New Zealand, a fact which in itself is a sufficient indication of the origin of the Moriōris. More than one species of seaweed was eaten, especially the green kind called by the settlers "sea lettuce."

Description of articles used in getting food, such as hooks and lines, fish traps, bird spears and snares, and similar articles is given on page 81.

The method of making fire is described by Shand (56, pp. 7-8):

The Moriōris procured fire in the same manner as all other Polynesians, by the friction of a pointed stick—*ure*—the rubber (Maori, *kaureure*) on a piece of wood of slightly softer

material. By the quick and vigorous use of the rubber, a slight groove was forced in the *kahunaki*, which rapidly widened by vigorous chafing—(*hokowawe*—[*whakawawe*, in Maori] to hasten the kindling of the fire)—and formed a light dust which was pushed together by the working, and caught fire with the heat engendered. The operation was called *Hika-ahi* or *ehi*—raising fire. Experience soon showed the most suitable kinds of wood to use; and the women, who were adepts at raising fire, treasured with great care their *ure* and *kahunaki*, which were kept in a dry place for use when required. *Inihina*—*hinahina* or *mahoe*, in Maori—was considered the best wood for the rubber; but *karamu*, *karaka*, *ake*, *rautini*, and *kokopere* (Maori, *kawakawa*) were used as the *kahunaki*, or grooved piece of wood. When the people were living on the outlying islets engaged in bird-catching, where no wood is available, they used a kind of peat called *pungaingai* as fuel, as well as seal bones, which burnt well owing to the oil in them.

To procure firewood the Morioris ringbarked suitable trees in the neighborhood of the settlement, and felled them when they were brittle and dry. To make a fire the ends of two or more logs were ignited and the butts were pushed forward as the inner ends were consumed. The theft of firewood was one of the commonest causes of quarrels.

GAMES

W. Travers (10, p. 354), says: "They appear to have been a very cheerful people, fond of singing, and of telling laughable stories," but Gilbert Mair (16, p. 312), states that, unlike the Maoris, they have neither songs nor chants, a statement amply disproved by numbers of both preserved by Shand. Mair further states that the Morioris had a kind of dance in which they flourished short sticks round their heads. Shand's account (56, p. 11) is much fuller:

For amusements, the people had high-jumping, called *poi* and *hiti*; skipping with a rope; cats' cradles (*whai*), etc., but no musical instrument, although they knew traditionally of the *koauau*, or flute of the Maoris, the use of which, however, was neglected. They had also *kapa*, a kind of dance, somewhat similar to a Maori *haka*, in which the people were arranged in two parallel rows one behind the other, the front row swaying from side to side, from the hip joints upwards, in an awkward sidelong manner, and it was accompanied by a song. During the performance, the back row changed places with the front row. It is somewhat difficult to accurately describe such a dance in all its minutiae, having only been witnessed once or twice; but the impression left on me was that, generally speaking, it was tame and lacked the energy and "go" of a Maori *haka*; possibly this arose from the quiet habits of the Moriori. It is quite possible, however, had it been represented by younger people, and those accustomed to it, much more energy might have been imparted to the performance. In the long winter nights they varied the monotony by reciting *Ko Matangiao*, and all their legends, by way of keeping up the knowledge of their history and traditions, as well as for amusement, but this was generally done in houses set apart for the purpose; when once commenced, the songs and chants were frequently kept up till day-break, and so no one could sleep.

RELIGION AND RITUAL, GENERAL FEATURES

Frederick Hunt (10, p. 30) says:

They paid no homage to a deity, indeed they had no idea of a beneficent Supreme Being; but lofty or isolated rocks which afforded them a bountiful supply of sea-birds they invariably mentioned with respect, naming them *atua pai* or good gods. But the everlasting *Kiko-kiko* was a terrible bugbear to old and young.

Hunt then gives some instances of this fear, and concludes:

It was by no means an unusual thing for a person to affirm that he or she had been visited by the *kiko-kiko*; in which case, at the slightest approach of sickness, they would resign themselves to death, which . . . was the invariable result.

Shand (56, p. 101) states that *Kiko-kiko* was the god of Kahu, discoverer of the islands, and that Kahu secreted *Kiko-kiko* on the north coast of Chatham Island. Among the Maoris the *atua kikokiko* were a group of ancestral deities responsible for disease.

All the rest of the available information regarding Moriori religion is summed up in the work of Shand, on whose authority unless otherwise expressly stated the following facts are given.

The number of the gods was large. At the head of them must be placed two shadowy deities, Wai-o-rangi, father of the universe, and Tami-te-ra, the sun-god. Shand renders this name "Tami-hit-ta-ra"—Maori Tama-whiti-te-ra—and states that his wives were Hine-ata, morning; Hina-aotea, noon; and Hina-ahiahi, evening.) All that is known of these two deities is contained in a dirge preserved by Shand and in his notes on it. The person reciting it held the head of the dying man in the hollow of his arm, and, pointing to the sun, spoke as follows:

CHATHAM ISLAND VERSION

Ascend direct above
To the beams of the sun,
To the rays of the morning,
Thou, O son, grandchild of Waiorangi;
Ascend direct, ascend direct above
To Hikurangi, to Rarotonga,
To the source, to the sun,
To Whangamatata, the gate of Rangiriri;
Ascend direct, ascend direct thither.
To the cold, to the cold, to the cold,
Ascend direct, ascend direct thither.
Thou art severed, thou art separated,
Ascend direct, ascend direct above,

To the first heaven, to the second heaven,
 Ascend direct, ascend direct above.
 To the third heaven, to the fourth heaven,
 Ascend direct, ascend direct above.
 To the seventh heaven, to the eighth heaven,
 Ascend direct, ascend direct above,
 To the heaven which has never been reached—O spirit of heaven,
 Ascend direct, ascend direct above.

PITT ISLAND VERSION

Spring up, spring away to the stars, to the moon,
 To the sun, to the gathered clouds, to the parting clouds, ka.
 The heaven stricken by Tu, devoured by Heuoro,
 Ascend direct, ascend direct thither.
 Ascend to the Morn-of-Heia, ascend to the breaking morn;
 Gather together the Morn-of-Heia, gather the morn beyond the horizon.
 Ascend direct, ascend direct thither.
 Ascend to the first horizon, ascend to the second horizon,
 Ascend to the third horizon, ascend to the fourth horizon,
 To the horizon beyond, to the horizon without, to the horizon of the gentle air.
 To the horizon of the gentle air of Wairuarangi; go thither.
 Rise up in Tchupuaki-o-Kiti, rise up in Tchupuaki-o-Tonga,
 Rise up in the crown-of-the-gathering-of-happy-heavens; go thither.
 To the source, to the hundreds, to the many, to the innumerable,
 Thou, O son, the only child, lost art thou to desire.

“The name of the first dirge is Tami-te-ra [Child of the sun.] The departing spirit is addressed as the grandchild of Wai-o-rangi, who is said to be identical with Torangi, a great Maori deity, and, according to the Moriori, the father of all men, to whom the spirit of the dying man is urged to ascend. The spirit is urged to ascend to Hikurangi, to Rarotonga, to the source of the race, to the sun, to Whanga-matata (heaven-opening), to the gate of Rangiriri, a name implying the inaccessibility of heaven. He passes through the succeeding spheres to Wairuarangi, the Spirit of Heaven. Beyond this single mention the Morioris appeared to know nothing of Wairuarangi, “although a few years back one of the older generation formally addressed a deceased relative, saying: ‘Go to Wairuarangi,’ which appeared to be, as here, the final limit to be reached, thus partly resuscitating their old beliefs, to the scandal of those who were Christians.”

“The second dirge is similar to the first. In both the heavens appeared to be the ultimate rest of the departed spirit. But for these dirges there would be nothing to show the ancient belief of the Morioris in these matters, for the old men when questioned gave some vague statement as to the spirit going, in the case of

evil doers, to the Shades (to Hine-iti) to eat worms and excrement, (This statement as to the punishment of the souls of evil-doers so directly conflicts with Polynesian thought in general that it must be attributed to missionary influence.) but had no clear conception of anything."

This sun cult seems to have affected their view of strangers, for Broughton says (2, p. 91): "On our first landing their surprise and exclamations can hardly be imagined; they pointed to the sun and then to us, as if to ask whether we came from thence." Here, also, may be mentioned the Moriori belief that their hereditary chiefs were heaven-descended, and the rite of sending to sea a *waka-ra*. (See p. 62.)

The conception of that part of the universe which lies above the earth as a series of planes or hemispheres in the lowest of which is the sun is closely related to the Maori conception and also to the Manganian.⁹

But there are two other groups of gods which occupy a much more prominent place in Moriori theology than Wairuarangi and Tama-te-ra (child of the sun). To the first group belong Rangi and Papa, sky-father and earth-mother, and their offspring: Tu, god of war; Tane, god of the forest and its products; Tangaroa, god of the sea and all that is within it; Rongo, god of blackfish, and not of cultivated food as he is among the Maoris; and Tiki, who, according to one Moriori version, is an offspring of Rangi and Papa, and according to another, is the maker of all things. With this group may also be associated Pou, a god of fish, and Heauoro and Maru, both connected with war, the latter being invoked to heal wounds or broken bones.

Of members of the second group, which may be described as distinctly less powerful than the first, and as not standing in filial relation to Rangi and Papa, some twenty names have been preserved. Many were shark gods, and many, it may be surmised, were deified ancestors. Rongo-mai-tauira, god of lightning, of eels, and of "Will-o'-the-wisp," is of more interest than the rest. A comparison with other names of gods, such as Rongomai-awaiti, Rongomai-tuatanga, Rongomai-whiti, suggests that "Rongomai" is a prefix denoting a god. This is proved conclusively by the following statement by Shand: "They set up an image of Rongomai-tuatanga. This particular Rongomai was used by the Karewa people, but another Rongomai by those of other parts of the island." If the prefix is removed the eel-god's name remains as Tauira. In a charm used by Maui when hauling ashore the great eel, the version of Ngati-kuia (South Island of New Zealand) has the following words:

Mata tuna ki te rango tuatahi,
Ko ira i, ko ira i, ko ira i, toro ai.

⁹ Gill, Wyatt, *Myths of the South Pacific*, p. 2, London, 1876.

This couplet was untranslatable until it was suggested by Mr. Best that, as Ira (or Indra) was the eel-god of ancient India, the word Ira might designate an eel-god here, in which case the translation would present no difficulties. The fact that Tauira is the eel-god of the Morioris indicates the probable accuracy of Best's suggestion.

The place at which formal religious ritual was carried out was the *tuahu* (heap or mound),¹⁰ which was generally the common burial place.

There were, however, several kinds of *tuahu*, each being appropriate to a distinct class of rite. Thus, when baptism was to be performed a *tuahu* was selected, generally the one where previous baptisms had taken place, and near the home, and on it sticks were inserted in two parallel rows six or eight feet apart and about ten feet in length. The sticks, called *tchu* (Maori *tua*) were about two feet in length, and to each a bunch of grass had been tied so that the butts of the grass were uppermost. Into this enclosure stepped the *tohunga* (priest) with his *tauira* (acolyte), while at the other end the mother entered, holding the child. The duty of the *tauira* was to hold the *puvai*, or conical water vessel made from the soft inner leaves of *Phormium tenax*. This was placed with the point on the ground and was supported by a little scaffold of sticks, the *tauira* holding it with an improvised handle. Then, with the recitation of incantations, the *tohunga* dipped his hand into the *puvai* which was lifted by the *tauira*, and water was sprinkled on the forehead of the child. The whole ceremony, which is described in detail by Shand (56, p. 169) concluded with a race and a feast for the children. The ceremony for female babies differed in detail, the *tchua*, for example, being placed in double rows on the *tuahu*, and each pair leaning inwards and crossing at the top.

In the ceremonies relating to Tiki (the first man), of which only a very fragmentary account was given by the old men, there appears to be a close resemblance to those of the *tohinga*, if they were not really a variation of the same ceremony. Neatly carved figures of birds were made out of *akeake* wood, twenty or more in number, and these were placed in parallel rows on the *tuahu*, which was generally the place where the same kind of ceremonies had been performed before. The Kekerione people, placed at one end of the *tuahu* a carved figure of Rongomai-tuatanga (Rongomai of the baptismal service) as the presiding deity, but natives of other parts of the island adopted another Rongomai. If the old material of former ceremonies was rotten, it was placed in heaps, but if sound it was used

¹⁰ *Tuahu* has a similar meaning in Maori, but does not seem ever to have included a burial place; James Cowan in his *Maoris of New Zealand* (p. 110) figures a *tuahu* near Rotorua in which four roughly squared stones are set up, representing the principal gods of the Arawa tribe. Compare Easter Island *ahu*, a stone platform where burial took place and where the huge stone ancestral figures were erected. Compare also Maori *ahu-reva* and *tuahu*. Shand (p. 184) speaks of the enormous heaps of human bones on the various *tuahu*. There is a picture of one by Miss Stoddart in the Canterbury Museum.

again. Generally the ceremony took place each year, but sometimes two and even three years elapsed before its renewal; its duration was three and even four days, which were called: *Ta ra o tch chei* (day of the evening); *ta ra o ro papa* (day of the foundation); *ta ra o l'waiunga* (the day of the following); and a fourth, *ta ra o l'whakaroro* (the prolonged day). The chief *tohunga* did not eat during the ceremony, but the others did so freely. Everything connected with this ceremony was performed by women¹¹ and as when Shand wrote there were none surviving who had taken part in them, the significance of the names is unknown.

There was another ceremony in which the stick with a bunch of grass attached was used, which Welch (14, p. 100) describes as follows:

Their belief in evil spirits was, I rather think, confined to the idea that, after the death of one of their number, an evil spirit came to carry away the soul of the deceased, and, in order to prevent such an occurrence, a fire was usually lighted, round which they ranged themselves, each holding a stick, tied to which was a bunch of spear-grass (*Gingidium dieffenbachii*), meantime chanting a monotonous song. This was supposed to keep away all evil spirits, and was an invariable occurrence on the death of one of their tribe. As soon as black-fish came ashore the ceremony ended and the fire was allowed to go out.

The black-fish or whales were sent by the soul, apparently as a sign that fire and whisks were no longer needed to protect it. Hunt's account (10, p. 35) of this ritual is as follows:

To prevent the dead from troubling them they had a curious custom. As soon as the breath had left the body they would all assemble at midnight (*sic*) in some secluded spot, and proceed to kill the *kiko-kiko*. First kindling a large fire, they would sit round in a circle, each person holding a long rod in his hand; to the end of each rod a tuft of spear-grass was tied; they would then sway their bodies to and fro, waving the rods over the fire in every direction, jabbering strange and unintelligible incantations.

There is thus evidence that whisks were used in ritual connected with baptism and with death, and also in the Tiki ritual, but only in connection with death have their functions been recorded. Hunt's evidence indicates that the whisks were used to drive away the spirit of the dead tribesman, while Welch states that they were used to protect that spirit against others which tried to molest it. In either case their function was protection against malevolent spirits. It seems highly probable that they are to be equated with the "fly-flaps" of Eastern Polynesia so frequently mentioned by early voyagers. These are always said to have been tabu and the emblems of the gods were frequently carved on their handles. By a further development these Eastern Polynesian "fly-flaps" seem to have become idols or representatives of the gods themselves. One is figured by Ellis¹² in a plate showing

¹¹ A similar connection between women and the worship of Tiki among the Maoris has been noted by Best (57, p. 165).

¹² Ellis, W., Polynesian researches, Vol. II, frontispiece No. 4, London, 1829.

Polynesian idols, but he does not name or describe it. Another is figured by Sir Hercules Read,¹³ who describes it as Taringarue, high god of Atiu in the Cook islands.

BELIEFS RELATING TO THE SPIRIT WORLD

According to the beliefs of the Morioris the spirit immediately after death departed from the body to the main ridge of hills, along which it passed to Perau, the most westerly point of the island. J. W. Williams (38) says: "A low range of hills terminates at Operau and at the foot of the slope stands an ancient ake-ake tree. A root of this tree extends to the rocks below in which there is a blow-hole which sometimes emits a sound like human sighing." Referring to this spot Shand (56, p. 189) says that the spirit came "thither along the high range of the land down to where the *Rautini* grew, over the crossed branches of which went the chiefs, but under them the common people. Then, seizing the *aka* vine, the spirit swung off with a dive into the sea, emerging ultimately in Hawaiki, the cradle of their race." From these two accounts it will be seen that there is an extraordinarily close likeness not only between Maori and Moriori beliefs in this connection, but also in the physical features of the leaping-off place.¹⁴

Several writers have recorded the Moriori belief that shoals of black-fish which came ashore, or carcasses of whales, were sent by the souls of the recently departed. In connection with this belief there are two accounts of a special form of ritual which have to be considered, though in one of them there is no mention of the stranded fish. Hunt's description of this ritual has been quoted above.

Hunt appears to have understood the ritual as intended to render harmless the spirit of the deceased, and his explanation is supported by another incident which he has recorded. While he was watching a Moriori burial, a huge stone crashed down from the cliff above and completely destroyed coffin and body, an event which was hailed by the natives with joy as disposing for ever of the *kiko-kiko*. Welch, however, has another explanation (14, p. 99):

When one of their number died it was believed that his spirit would descend into the sea and send them some large fish ashore, and after a death they usually made fires on the sea-beach, and watched anxiously, day and night, for the expected gift. Even their conquest by the Maoris, their assimilation to the habits and manners of the latter, and their intercourse with Europeans, have failed to shake this belief, as, in September, 1867, one of the oldest of their people died at Waikarapi, four miles from the settlement of Waitangi, and was buried near his

¹³ Read, (Sir) Hercules, On the origin and sacred character of certain ornaments of the southeast Pacific: *Anthrop. Inst. Jour.*, Vol. 21, pp. 139-154, 1891-92.

¹⁴ See the account of the Reinga in S. Percy Smith's *Wars of the Northern Against the Southern Tribes*, Wellington, Whitcombe and Tombs. Among the Maoris, Paerau was an equivalent of Reinga.

hut, and it was believed that when his spirit descended into the sea he would send them some large fish ashore. So strong was the impression that fires were lighted on the beach, and they watched day and night for four days, when a large grampus was cast ashore within half a mile of the old man's *whare* (hut), and a general rejoicing followed. Their belief in evil spirits was, I rather think, confined to the idea that, after the death of one of their number, an evil spirit came to carry away the soul of the deceased, and, in order to prevent such an occurrence, a fire was usually lighted round which they ranged themselves, each holding a stick, tied to which was a bunch of spear-grass (*Gingidium dieffenbachii*), meantime chanting a monotonous song. This was supposed to keep away all evil spirits, and, was an invariable occurrence on the death of one of their tribe. This ceremony has died out from among them now, and when one dies they usually hold a *tangi* or wail for the dead, in the same way as the Maoris.

From this account it would appear that the fires were lighted and the whisks brandished to protect the soul of the deceased in its journey from the body to the jumping-off place at Perau, and that the grampus was regarded as a sign that it had evaded the dangers about its path, and had leaped into the sea and that the fires were needed no more.

As to the fate of the soul after it had reached the sea, there appear to have been several distinct beliefs, one that it passed to Hawaiki, the ancient homeland, another that it passed through the various spheres of heaven till it reached the sun and a third relegated it to the under-world.

RITUAL CONNECTED WITH STRANDED FISH

When a school of whales stranded on the shore the appropriate invocations and offerings were immediately made to Pou and Tangaroa, the head of the first whale stranded being placed on the *tuahu* sacred to them, to induce a recurrence of the event. The first fish caught were always kept and thrown on the *tuahu* as an offering (*whakahere*) to Pou; and so also with eels. Their heads were cut off and thrown down before a *tuwhatu*, which was in some places represented by a stone, but ordinarily by a lump of pumice very rudely shaped to represent a man's head. Such a *tuwhatu* was sacred to Tangaroa and Pou, of whom these rude carvings were symbolical. One of the best existing specimens of these is deposited in the Dominion Museum (PL.III). Fish thus thrown before the *tuwhatu* or the *tuahu* were left to rot there (56, p. 14).

According to a second series of beliefs black-fish and seals were sent ashore by Rongotakuiti. This deity sent the animals in response to the dispatch of a vessel called a *waka-ra*.

WAKA-RA

In describing the various types of vessel used by the Moriors, Shand (18, p. 354) says:

The fourth kind of canoe (sic) was like the New Zealand *mokihi* (or raft made of *rauho* leaves tied in bundles), but formed of *korari* (flax stems) and *rarauhe* (fern) stalks. It was quite low, and had wooden images of men placed on it, from twelve to twenty-four in number, each with a paddle tied to its hands. With a fair wind the canoe was started off to sea as a messenger to the god *Rongotakuiti*, who, in response, sent ashore shoals of seals and black-fish. It was called a *waka-ra*.

In the Deighton MS. preserved in the Dominion Museum there is an account of *waka-ra* obviously based on Shand's. It contains the additional statement that the vessel was launched with a westerly wind from the east coast of the island. *Waka* is the Moriori general term denoting vessel, while *ra* is descriptive. One of the meanings of *ra* in Maori is a sail. The Morioris had no sails, but it is possible that *waka-ra* may originally have meant a sailing canoe. Shand's informant, however, would have no inkling of that meaning, and evidently thought of it as a mastless vessel used for a purely religious purpose. To him *ra*, if it carried any signification at all, signified the sun. In accordance with this view it may be suggested that the twelve human figures on the *waka-ra* represented the twelve months of the Moriori year which, as Shand states (56, p. 201) were looked on as persons, the offspring of Tahiri-Mangate. (Tahiri was a chief in the mythical land from which all Moriori religious knowledge was derived.) The first month of the year was Rongo (July), and this name may be suggested as supplying a link with Rongotakuiti, the god to whom the *waka-ra* was despatched. No significance need be attached to the connection of this god with black-fish and seals, as the sending ashore of these sea-mammals is synonymous in Moriori thought with a high degree of benevolence and, as noted in the preceding section, is attributed to Tangaroa, to Pou, and to the souls of the dead as well as to *Rongotakuiti*. The doubling of the twelve figures on the *waka-ra* may have arisen from the inclusion of their female counterparts, and would in that case, illustrate a common tendency in primitive theology, a tendency of which there are several hints in Moriori religion. This idea was strongly marked in Maori philosophy: "There is nothing which stands alone without its female—all things have their female counterparts." (See Polynesian Society Journ., Vol. III, p. 137.)

CAUSING WIND OR RAIN

At this place mention should be made of the rites by which the wind was raised or rain induced, though such rites are usually described as magic rather than religion. Mr. John Renwick told me that Tapu, the most learned of the Morioris, said that he was always able to raise a favorable wind for fishing by tapping on the trunk of a *kopi* tree. This power left him when he was sixty years of age. Mr. R. McClurg also gave me information about the rite, and he suggested that two *kopi*

trees near Tennant Lake from the trunks of which rectangles of bark had been cut had been prepared for this purpose. The rectangles face N. W. and E. to N. E. respectively and breezes from these quarters would be along-shore and off-shore breezes.

There were also trees and rocks which—according to popular belief—responded to tapping by sending deluges of rain. One of these is a well-known mushroom-shaped limestone rock. This rock having been mentioned in the hearing of a case before the Native Land Court some years ago, the Judge decided to visit it. The guide to the party was Rua, a well-informed old Maori, who strongly urged the party to take overcoats. As it was a beautiful morning no one followed his advice and the whole party was drenched by rain which came on shortly after the stone had been rapped. I was told also of a rain-tree which regularly retaliated on a settler who left his plow under its shelter. Beliefs of this kind have passed from the Morioris to the Maoris and settlers, and though laughed at in public are still widely believed.

In the succeeding section the material forms of the gods—the Moriori idols—are discussed. There is, however, a whole class of "idols" of which not a single example has been preserved. As these played an important part in Moriori religion they are described here. Shand (56, p. 16) states:

Certain gods were represented at various places by carved images. There were five or six of them at Ouenga, on the southeast coast of the island; amongst them were incuded Maru and Rongomai. They are said to be hidden in an inaccessible cliff at Tupouranga, and are believed to be made of totara. It was customary to bind Maru with a plaited rope made of *pingao* (*Desmoschoenus spiralis*), and certain individuals claimed the right to operate on particular parts of the body, each in his turn working downward from the head, those binding round the head considering themselves the chief people in this office, whatever it implied. This performance was like some in Central Polynesia where the emblems of the gods were bound round with sinnet. These representatives of divinities were usually kept in caves, or on the burial places (*tuahu*); but were generally concealed for fear of their being stolen. Incantations were offered to these images, but how far they proceeded in their invocations appears uncertain. Although possessed of much sanctity, and much dreaded, they were evidently only emblematical of the gods after whom they were named, and were not idols in the true meaning of the word.

Two stories taken from Moriori tradition may be noted as illustrating the nature of the powers of these wooden figures. When the canoe Rangihoua was wrecked on the north coast of Chatham Island, its crew were suffering grievously from thirst. Honcke, *ariki* and priest, reached the shore and, finding a spring of water, bent eagerly to drink. Thirst had made him oblivious of the image of Rongomai-whiti which he carried on his back. The god, angered by this neglect, retaliated, and the priest died as he drank (56, p. 105). The second story tells of the killing of Henga by Hangarua. Hangarua took Henga's kidneys for his god

Rangihiki-wao, as an offering so that revenge might not overtake him and so that he might kill Moe also. So he went and uncovered his god and stuffed into him the kidneys of Henga, and then he left the god. When his back was turned, Whare-oro went to the god and caused him to vomit forth the fat of Henga, whereat he returned hastily to the rocks to fish. So the god was not appeased, and Hengarua fell a victim to the avenger (56, p. 121).

No example of the gods of this type has been preserved, but it is evident that they belonged to the type illustrated in figure 3. (See also *Jnl. Science & Tech.*, Vol. V, No. 3, p. 168, and *Polynesian Soc. Jour.* Vol. XXXII, p. 50.)

MORIORI MATERIAL CULTURE

CONCEPTION OF THE HUMAN FIGURE

As will be seen from an examination of the illustrations that follow, the Moriiori conception of the human figure expressed in the round differed materially from that expressed on the flat. Its general characteristics may conveniently be discussed here before we proceed to the carvings in the flat. The available material is scanty.

The larger face of the *tuxhatu* (Plate III, *a* and *c*) is too battered to be of use and this is also true of the face shown in Plate IV, *e*. The smaller face of the former and that shown in Plate IV, *d*, both belong to the conception expressed in carvings on the flat. Discussion is therefore restricted to Plate III, *d*, and Plate IV, *a, b, c*, for the face, and Plate IV, *a, b, c*, and Fig 3, *b* and *c* for body characteristics. The evidence of Plate III, *d*, suggests the possibility that the nose of Plate IV, *a, b, c*, was originally strongly convex. If this were so it would add a further point of resemblance to the wooden figures of Easter Island. (See fig. 2, *d, e*.)

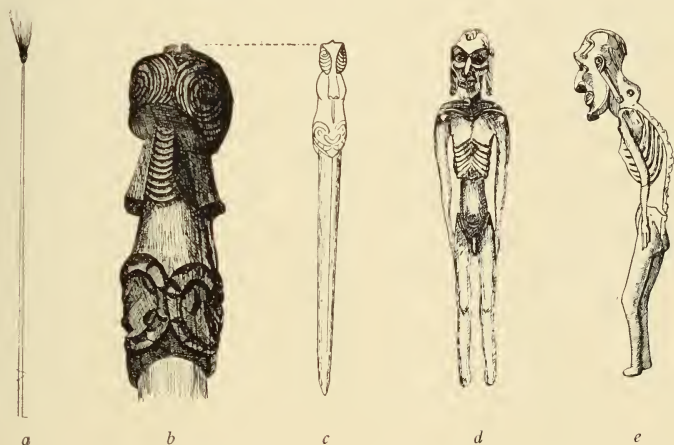


FIGURE 2.—*a*, Tabu wand with human hair, Southeast Pacific (27 *a*, pl. 36, No. 1); *b-c*, views of a two-faced figure representing a deity, Otago district (Fels Collection); *d-e*, two wooden figures from Easter Island (British Museum).

Judging from Shand's words, one face (Pl. III, *a, b*) represents Tangaroa and the other Pou, but which represents which is not specified. The likeness of the

larger head to some Hawaiian images may have no significance but the likeness between the smaller one and the faces that are most characteristic in northern Maori carving is certainly not accidental.

Figure 3, *b, c* and Plate IV, *a, b, c*, exemplify two attitudes common in Polynesian renderings of the human figure in the round, the former being in the squatting position with hands supporting the head, while the latter is erect with the hands resting on the lower part of the thorax. Figure 3, *b* and *c* supplement Plate IV, *a, b, c*, in one important respect, namely in having the ribs fully represented on the front of the thorax, while only the lowest is shown thus in Plate IV, *a, b, c*. This representation of the ribs occurs in some of the Moriori carvings on the flat and may also be seen in some Maori *hei-tiki* and in the cave drawings from the South Island of New Zealand. The scanty evidence seems to indicate that of such Moriori representations of the human figure in the round as have been preserved are more closely related to the wooden figures from Easter Island (fig. 2, *d* and *e*) than to any other representations of the human figure in the Pacific.

Mr. T. Ritchie, the owner of the specimen shown in Plate IV, *a, b, c*, gave me the following account of its discovery: When he first arrived at Chatham Island the Morioris often spoke of figures called *atua* which were in the bush, and which they regarded with considerable fear. After much questioning, a Maori who was married to a Moriori woman offered, in consideration of some pounds of tobacco, to show one to Mr. Ritchie. Taking him to an old Moriori burying ground in the bush near Manukau, the Maori pointed to this figure and then ran. The legs of the figure had been stuck in the ground but had rotted away, and it had fallen against a tree. The figure had a name, but Mr. Ritchie was not able to obtain it. For comparative purposes figures 2, *d* and *e*, and 3, *a*, are inserted.

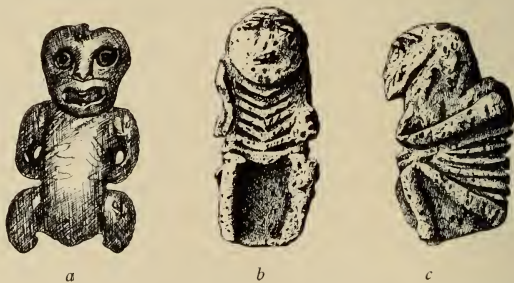


FIGURE 3.—Representations of the human figure: *a*, *hei-tiki*, northern Maori (Fels Collection); *b-c*, front and side views of Moriori *tuchatu* of pumice representing a body buried in the sitting position. The features are obliterated. Height about 10¾ inches (273 mm.) Note the ribs represented behind in *c*. (Pitt-Rivers Museum, Oxford. From H. Balfour: Some Specimens from the Chatham Isds. Man, vol. 18, No. 80.)

The characteristics of the Moriori conception of the human figure when expressed on the flat may now be discussed. The head is heart-shaped, and the eye is indicated by rings enclosing circles of untouched surface, while the nose is larger than is the case in Maori carvings, as seen in Plate V and in figure 4. The mouth approximates to natural size and outline, and does not present the dumb-bell shape exhibited in Plate IV, *a, d*, and figure 3, *a*. The limbs are disposed in the

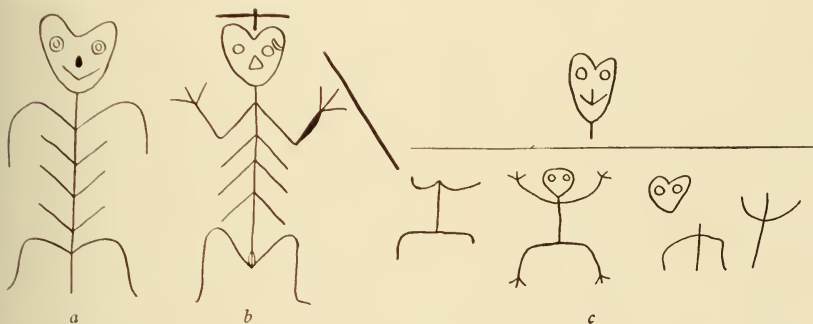


FIGURE 4.—Moriori tree-carvings: *a*, on *kopi* trunk from Owenga (Otago University Museum); *b*, on *kopi* trunk from Tennant Lake; *c*, on *kopi* trunk from Taia Bush.

dance attitude so characteristic of the figures on paddles and adz-handles from the Cook islands. The upper arm and the tibia are inclined downwards and outwards, while the femur and forearm are inclined upwards and outwards, so that elbow and knee approach closely or even meet. The whole space thus inclosed by the four limbs represents the body, and is often lined to indicate ribs. The line which passes from the neck to the junction of the lower limbs emphasizes the body but



FIGURE 5.—Sketch showing tendency in representations of human figures to lose head and arms: *a*, Hawaiian petroglyphs (B. P. Mus. Occ. Papers, Vol. 4, fig. 44, 1910); *b*, cave paintings, South Canterbury (after drawing by Elmore).

does not represent it. The number of fingers and toes varies, but, as is the case elsewhere in the South Pacific, three to each limb is the allowance most favored.

Perhaps the most remarkable feature of the figures in general is the tendency of the head to degenerate and disappear. This tendency is seen in the decorative

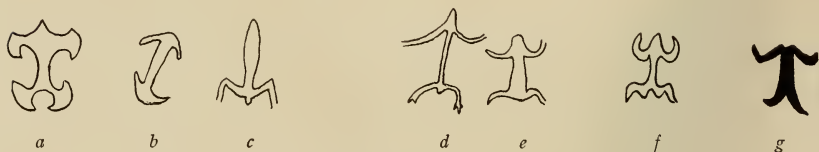


FIGURE 6.—Pictographs: *a-c*, cave paintings, South Canterbury, New Zealand, showing loss of head and arms (after drawing by Elmore); *f* and *g*, headless figures—*f*, from Easter Island inscription, *g*, from Tongan club (Univ. Pennsylvania Mus. Jour., Vol. II, fig. 55, 1922).

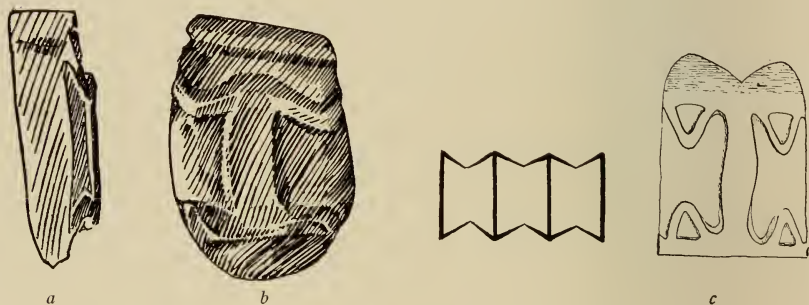


FIGURE 7.—Headless human figures: *a* and *b*, views of headless human figure on black stone pendant, South Canterbury (Otago University Museum); *c*, headless anthropomorphs, Kaiser Wilhelms Land (Zeitschr. Ethn. figs. 4 and 8, 1897).

art of New Guinea, the Solomons, Fiji, Tonga, Hawaii, Easter Island, and also of the Cook Islands, where it has been investigated by Dr. H. Stolpe¹⁵ and Sir Hercules Read.¹⁶ It is present also in the cave paintings of the South Island of New Zealand, and is expressed in headless anthropomorphic pendants from the same region. (See figs. 5 and 6.) The anthropomorphic pendants throw light on the Moriori conception of the human figure. (See fig. 8, *a* and *b*).

¹⁵Rochdale Lit. and Sci. Soc. Trans., vol. 3, . 73, 1891-92.

¹⁶Anth. Inst. Jour., vol. 21, p. 139, London, 1891.

SIGNIFICANCE OF THE HUMAN FIGURE IN TREE-CARVINGS

No feature of Moriori culture has aroused more interest than the tree-carvings, and no feature has been more fruitful in theories that attempt to explain their meaning. The first of these theories appear to have been advanced by Travers (20), who stated that each figure indicated the private ownership of the tree on

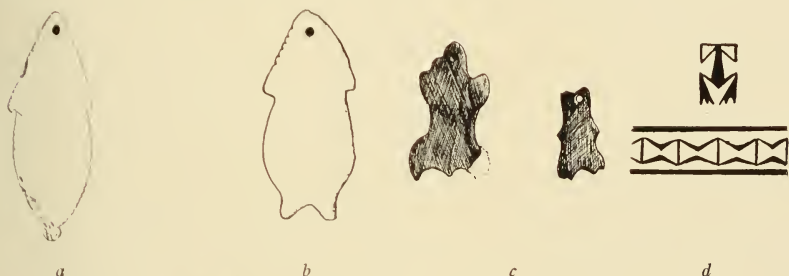


FIGURE 8.—Pendants: *a*, Moriori anthropomorphic pendant of whalebone, with light notching, legs coalesced, length $3\frac{3}{4}$ inches (94 mm.), thickness one-tenth of an inch (3 mm.) (Canterbury Museum); *b*, Moriori anthropomorphic pendant made from a thin piece of whalebone, length 3 inches (76 mm.), the left shoulder showing faint notches that were probably continuous round the edge; *c*, anthropomorphic jade pendants from Otago, New Zealand (Bristol Museum); *d*, headless anthropomorphs, Cook Islands (after Stolpe).

which it was carved, and that a desire to appropriate the fruit was always the motive leading to a claim of ownership. But Mair's criticism (Hamilton, 49) that the fruit existed in quantities far exceeding any possible demand, disposes of the motive suggested by Travers. And further, Shand states that the idea of private property was even less developed among the Moriors than among the Maoris.

A different explanation is suggested by Dendy (44, p. 123), who figures a series of Moriori human and bird carvings and quotes Hunt's account of the tying of corpses to tree-trunks, and adds:

If for any reason the Moriors really did abandon their ancient custom of tree-burial, it is not difficult to believe that they might, in place of the actual bodies, carve upon the bark of the trees those remarkable figures which are so clearly intended to represent skeletons. Such carvings would serve as a *memento mori* almost as well as the corpse itself, without the obvious disadvantages of the latter. There are several reasons why the *kopi* tree should always have been selected for the carving.. It is almost the only tree large enough, and, on account of the smooth nature of the bark, quite the most suitable: while if there was any right of individual ownership in the trees, it is not unnatural to suppose that the effigy of the departed would be placed on his own property.

But Dr. Dendy's assumption that "the figures are clearly intended to represent skeletons," is inadmissible, for in no case does the head exhibit any feature characteristic of a skull, and the indication of ribs, a feature on which Dendy chiefly relies, means nothing. Ribs are shown on the Easter Island figures, which certainly do not represent skeletons. They also appear in some of the dancing figures drawn on the walls or rock shelters in Canterbury and Otago, and occasionally also in Maori *hei-tiki*. Further, the greater number of the Moriori figures have no ribs at all, as is the case with two of the four figures given by Dendy himself. This conclusion being invalid, the theory based on it—namely, that the figures are a development of tree-burial—becomes invalid also.

A different explanation is given by Williams (39) who says: "The Morioris have a confused notion of good and evil spirits, and the aid of numerous deities was always invoked prior to any undertaking of importance. The supposed dwelling of a deity was indicated by a rude carving on the back of a *kopi* tree, and according to the nature of the enterprise in hand the abodes of the spirits protecting such ventures were sought out and venerated. I had observed many of these curious marks and was somewhat puzzled as to their significance." Hamilton (49) advances a similar theory, and notes the occurrence of sacred trees in New Zealand but he is not able to state that such trees were ever carved.

It is to be noted that not one of these authors can adduce on occasion when the motive suggested has actually operated. This failure is obviously due to that fact that the making of the carvings ceased long ago, and to the rarity of the pamphlet in which is set forth the only record of the making of a carving. In Hunt's autobiography the story of the murder of Meinui's wife and child is told and Hunt records that Meinui placed the bodies in a cave, and afterwards carved figures of the two on a *karaka* tree.

Among the settlers at Chatham Island that I questioned at the time of my visit, opinion on the subject of these figures was vague. Mr. T. Ritchie, however, believed that they represented the dead. This, taken in conjunction with the views, already noted, of Hunt and Williams, might suggest that we have here evidence of a decadent cult of the dead. In a manuscript letter preserved in the Dominion Museum Shand states that the Morioris called the figures "birds," and this nomenclature would present no difficulty if the Morioris supposed that the soul of the dead passed into a bird, as is believed in some other parts of the Pacific. But there is no evidence whatever of such a belief among the Morioris, and the name "bird" therefore remains a problem whatever explanation of the figures is adopted. There are two pieces of evidence which seem finally to dispose of the theory that they are connected with a cult of the dead. In the first place the figures are not associated with

burial grounds but are to be seen scattered around the old centers of population and in close proximity to the sites of dwellings. In the second place the fact that they are frequently found on large and fruitful *kopi* trees forbids any idea of sanctity.

We must therefore conclude that they are purely commemorative and that they are comparable with the carved ancestral figures in Maori guest-houses. This conclusion receives support from the fact that two figures, one above the other, often occur, and I was told of an instance in which there were three arranged vertically, an arrangement of which there are examples in every Maori *whare-puni*.

Besides the human figures a few rectilinear patterns have been seen on trees, most of them in the Taia Bush. The simplest were vertical strokes, several to a tree. There were two examples of Pattern 1 (fig. 9, *a*), each consisting

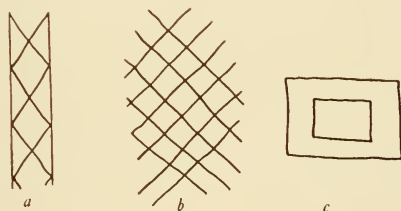


FIGURE 9.—Rectilinear patterns on trees: *a* and *b* from Taia Bush, *c*, from Tennant Lake.

of about a dozen diamonds enclosed between two vertical lines. Pattern 2 (fig. 9, *b*) was on a tree beside what was perhaps intended to represent a human figure. There was nothing to indicate a difference in age between these patterns and the human figures, and the latter were undoubtedly of Moriori origin. But I have since been informed by Mr. John Renwick that the patterns are the work of Europeans. This was quite unexpected, as they resemble fairly closely the rectilinear designs on the Moriori flute and on the toggles. Pattern 3 (fig. 9, *c*), which appeared to be of the same age as the numerous human figures on the trees about it, has no parallel, so far as I know, among Moriori designs.

ROCK-CARVINGS AT TE ANA-A-NUNUKU

Along part of the western shore of Te Whanga runs a low line of limestone cliffs on which there are a number of Moriori carvings. The southernmost

of these is at Tamata-kuru, which is about half a mile north of Rangitira, and the most northern appears to be at Te-Ana-a-Nunuku—at any rate a close scrutiny of the cliff face from that cave northward failed to reveal any carvings. The most important groups are those at the entrance of the cave (*te ana* or *te hana*) of Nunuku (Pl. xxxv, *b*). They are arranged in an upper, nearly horizontal, row and a lower band, its upper margin more or less parallel with the first but spreading out irregularly below. At a first view the attention is taken by the upper row and the impression is one of purpose and meaning, as though each separate figure were a unit in an inscription. A more detailed examination failed to sustain this impression. Dr. H. O. Forbes¹⁷ had compared the carvings at this place with the Easter Island script, and as several points in Moriori material culture indicate a connection between these widely separated branches of the Polynesian race, I tried for a long time to identify characters of the Easter Island



FIGURE 10.—Birds carved on a limestone cliff near Te Ana-a-Nunuku, Chatham Islands.

script. After a minute examination I failed to find a single one. A few yards to the south of the cave is a group of carvings which give the key to the whole, or at any rate to the great majority of those at the cave itself. (See fig. 10.) From these it is clear that each unit represents a bird. The greater number of these birds can be recognized as of the same kind as those shown in the wood carvings preserved in the Dominion Museum. The beaks in the rock carvings are straight and flat, and are for the most part stretched upwards at an angle approaching the vertical. The birds are often arranged in pairs, back to back or breast to breast, as are also those in the wood carvings. Most of the birds figured have so little thinning at the neck that they assume what is, I believe, a quite unintentional resemblance to penguins or short-necked shags. Some of the beaks are curved, but this appeared to me to be accidental, or at any rate not intended to indicate specific difference.

Photographs of the Ana-a-Nunuka carvings were shown to Dr. R. V. Fulton, well-known as an authority on New Zealand bird life. In his opinion the

¹⁷ Roy, *Geog. Soc. Jour.*, vol. 49, p. 346, 1917.

carvings so closely resemble a penguin rookery that it is legitimate to suppose the former existence of such a rookery on some island of the group. He had never seen any native duck assume the attitude of upraised beak so common in the carvings nor did they pair in the manner represented, but both these characteristics may be noted among penguins. If penguins have to be ruled out, Dr. Fulton would suggest shags, though the absence of a hooked beak weighs against that identification.

The mouth of the cave itself is almost blocked by a long mound of humus which has fallen from the top of the cliff. That this bank dates back to Moriori times is indicated by the fact that the upper row of birds could be cut without difficulty by a person of average height standing on it. The floor of the cave is covered by standing water which appears to be not more than a foot in depth. The cave has been in the same state for a considerable period and Shand felt this to be a difficulty when discussing the origin of its name (56, p. 137), for the cave is said to have been the residence of Nunuku, a man who plays an important part in the traditions of the Morioris. It is said that he was one of the people who, according to the usually accepted legend, inhabited the group when the canoe Rangimata arrived. According to another tradition he came in the Rangimata canoe (56, p. 106), whence it follows that he belonged to the Wheteina tribe. This tradition by inference denies the existence of the earlier people. A third tradition makes him a close relative (grandparent according to Shand) of Moe, leader of the Rauru in their war against Wheteina. It is stated that Nunuku hid in his cave-dwelling a fugitive party of Wheteina and that when Moe demanded their surrender Nunuku spirited them away through an underground passage, the exit to which was two miles away on the Kekerione beach. The last member of the fugitive party was caught by Moe. A fact of importance in this story is a slab of stone called "The Door of Nunuku's House." Shand gives its name in one place (56, p. 137) as "Te tau o ro whare o Nunuku," and in another as "Te tatau o te ana o Nunuku." (MS. in Dominion Museum.) But identically the same legend is told in Northern Taranaki of the escape of an aboriginal people through a long tunnel whose exit was the beach. In this New Zealand story the last of the fugitives was caught as she fitted down the stone slab on the mouth of the tunnel. It will be seen, therefore, that though Nunuku may possibly have been an historic personage who lived on Chatham Island, his deeds and attributes fall within the realm of mythology. To Nunuku is usually attributed the law forbidding warfare among the Morioris. This reform is also attributed to Horopapa.

To my great regret I was unable to examine the carvings at Tama-takuru but the statement of Shand that they were faint or obliterated was confirmed by settlers.

I was informed that the Morioris stated that the carvings were there on the cliff-face when their ancestors first came to the islands. Shand, (Dom. Mus. MS) says:

Whatever the carvings were intended to represent was quite unknown to the old Morioris who first told me of and showed them to me some years ago. All they could say was "*Nanuia*"—it was done by their ancestors, but that the Tanira pattern, from which all the carvings were taken, was from a small limestone rock about three miles from More-roa, also on the Whanga lake, at a place called Moutapu where they also showed me two or three of the same sickle-shaped figures.

A comparison of these rock-carvings with the wood-carvings in the Dominion Museum will convince any one that both were executed by the same people. The fact that the old Morioris in Shand's time attached no special meaning to them probably indicates that they had no religious or magical significance and were purely representative.

Dr. Forbes states that in addition to the carvings just described "hieroglyphs" occur at Chatham Island. A special investigation was made of this point, but in spite of the most careful inquiries and a minute examination of every available object of Moriori manufacture, no trace of them was found. Shand has a reference to laws inscribed on stone, but this can safely be attributed to missionary influence.

HOUSES

The simplest type of shelter used by the Morioris was the lean-to or wind-break mentioned first by Travers (11), but described in more detail by Welch (14):

Dwelling paces consisting of two poles stuck in the ground, and a crosspiece from one to the other, against which a few branches of trees were placed on a sloping position, with some flax-leaves to form a shelter. These were their only (*sic*) dwelling places, and were mostly at the outskirts of the bush, where the surrounding timber sufficed to break the wind, and shelter them a little from the rain. These huts were used for a day or two, as they wandered about from place to place, wherever food was most abundant.

Circular shelters or huts are mentioned by the discoverers and by Travers. Broughton (2, p. 87) says: "The woods afforded a delightful shade and being clear of undergrowth, were in many places formed into arbors, by bending the branches when young, and enclosing them round with smaller trees." Later (p. 89) he says: "On tracing some of the foot-paths, nothing was discovered but

great masses of ear-shells, and recesses formed in the same manner, with a single palisade, as those seen on our first landing." Johnston says (McNab, 60, p. 505): "We examined the skirts of the wood, where we found no other signs of habitations than a small circle of clear ground, sometimes fenced in by a simple palisade. In the centre of this circle was the mark of a fire place, and a great number of fish shells lay about, particularly the earshell. This had no other covering than the growing branches of the trees." These two descriptions probably refer to a crude variety of the circular huts mentioned by Travers (20, p. 21): "Circular huts, composed like those of the Kaffirs, of a circle of poles drawn together at the top, and then thatched, a trench being dug to carry off the water."

Shand does not mention either lean-tos or circular huts, but says (56, p. 4):

The people generally lived together in small communities in huts thatched with *toetoe* (*Arundo conspicua*) and rushes. For the sake of warmth the houses were frequently lined with the bark of the *akeake* tree (*Olcaria traversii*), the heart wood of which is very durable and the most valuable found on the islands. Their huts were oblong and \wedge -shaped without walls, and the better class were carved and ornamented to a certain extent. Cooking was carried on in huts distinct from the sleeping houses, and these were *tapu* to the men. . . . The villages or residences (*whare*) were built in sheltered nooks, either on the borders of or in the forest.

Travers (20, p. 21) describes these larger houses, oblong in plan, as being built of poles with one end on the ground ranged along both sides of a ridge-

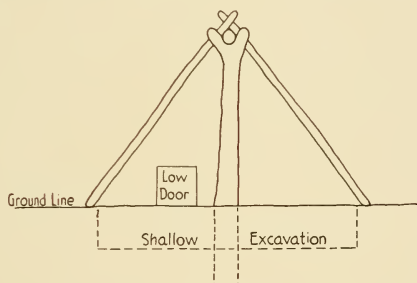


FIGURE 11.—Front elevation of a Moriori rectangular *whare* at Te Roto. The rafters were covered with thatch made of *toi-toi* leaves. (Drawing based on information from Mr. R. McClurg.)

pole. The whole of the roof thus constituted was thatched, and a trench was dug round it to carry off the water. "Their meeting houses were occasionally decorated with rude carvings, of which specimens were brought over by my son, and placed in the Wellington Museum." These must be the carving shown in Plate VI, of which no record is preserved in the Museum registers.

Shand refers (56, p. 12) to buildings set apart for the purpose of teaching history and traditions.

In describing a Moriori marriage ceremony Shand (56, p. 17) says that the house was swept and that mats (*tokou*) were laid in parallel rows down its length, the fire being in the middle, below a trap in the roof through which the smoke passed out. This statement indicates that some Moriori houses were of considerable size. On a terrace above Tennant's Lake I measured the rectangular depression marking the site of a very large house, 72 feet in length and 12 feet wide. There was no sign of any of the timbers, but within the rectangle I found the lower larger part of a fire-making apparatus.

Near Mr. R. McClurg's house at Te Roto there were till recently the ruins of a house (fig. 11).

The facts already set forth indicate that the following types of shelter were used by the Morioris: the lean-to, the circular hut, and the rectangular house, and further that special houses were set apart for cooking, for teaching, and for social life. There is no specific reference to the smaller class of rectangular house that would shelter about six persons, but there is no reason to doubt that such houses existed. All the principal types of house and house-function that were present among the Maoris are, therefore, recorded for the Morioris with the single exception of the storehouse on piles. Its absence at the Chathams is probably due to the fact that the Morioris did not require a storehouse, as gardens and cultivated plants were lacking. In New Zealand the storehouse on piles was the only type of building in which the front was composed of vertical carved planks. In such other Maori buildings as were decorated with carving the parts so treated were the doorway and the window and the outline timbers of the porch. The carvings shown in Plate VI seem to indicate that the social hall of the Moriori village had its front wall composed of carved vertical slabs. If this really was so, however, it was a local variation without known parallel in New Zealand.

On the evidence we must conclude that as regards types of house the Morioris and the Maoris form a single culture unit.

The carved woodwork of Moriori houses which has been preserved is only fragmentary. Plate VI represents the pieces of house carving collected by H. H. Travers and now in the Dominion Museum, Wellington. The longest piece is 1575 millimeters (5 feet 2 inches) long, but part of it must have been below the ground. The wide piece which forks at the top has been sawn off, apparently at the ground level. Its height is 1575 millimeters (5 feet 2 inches), and it appears to have been the central slab in the front of a *whare*, supporting in the notch the main beam of the roof. The angle at which the roof sloped to

the eaves is indicated by the angle at which the tops of some of the slabs are cut. This feature seems to indicate that the whole of the front of the *whare* was formed of carved slabs.

A discussion of the figures carved on the slabs will be found in succeeding sections; for comparison figure 12 is inserted. The representation of birds, apparently ducks, in pairs on house-planks appears to be a local characteristic. The spirals seem to represent some living form, perhaps a snake, and they have undoubted parallels in New Zealand and in northeast New Guinea. Whether they are related, even distantly, to the spirals used so lavishly in north Maori wood-carving may be

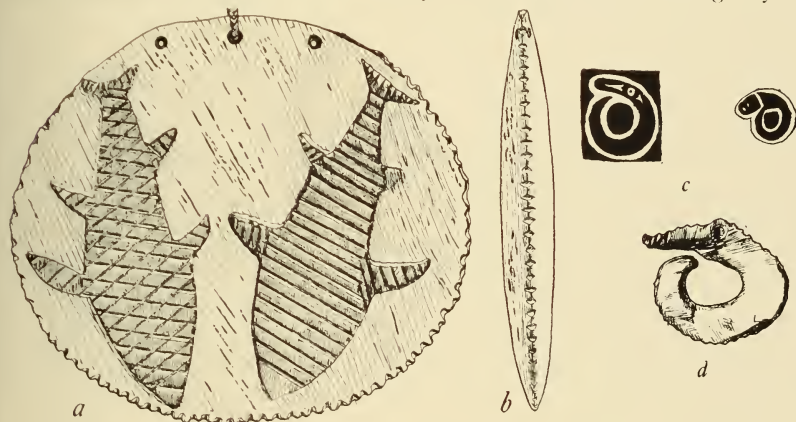


FIGURE 12.—Sketches showing stone work with ornamentation somewhat like that on house fronts: *a-b*, Front and side views of a black stone pendant from Banks Peninsula, New Zealand, the lattice ornamentation on the left-hand fish resembling that carved on the figures of ducks in Plate VI (Thacker Collection); *c*, carvings perhaps representing snakes, Kaiser Wilhelms Land (Preuss. Zeitschr. Ethn., figs. 168 and 169, 1897); *d*, nephrite pendant from Warrington, Otago, New Zealand (Dominion Museum).

doubted. The lattice-work decoration on the topmost bird in the middle plank finds a parallel on a pendant from Banks Peninsula. For further discussion see page 124.

IMPLEMENTS

NEEDLES, PICKERS, AND KNIVES

Moriors needles (Pl. *a-c*) are not numerous in collections. No information has been preserved as to their use, but they were probably used in stitching together the sealskin cloaks and in plaiting mats and in thatching houses. Plate IX *d* is probably a gouge used in carving, and *e* is a shell-fish picker or awl.

There is no difficulty in distinguishing between typical needles and typical shellfish pickers, but there are many intermediate forms which may belong to either class or to both. (See fig. 13, c.)

Knives composed of sharks' teeth set in a groove in a wooden handle and secured there by flax binding have been recorded in several parts of Polynesia, notably in Hawaii and New Zealand. There are in the Auckland Museum, the Bernice Pauahi Bishop Museum, and the Museum of Archaeology and Ethnology at Cambridge a series of sharks' teeth from Chatham Island—a fact that indicates the existence of similar knives or saws among the Morioris. In each of these teeth the base has been ground flat so that it may fit firmly in the groove, and the outer angles have been cut square so that the teeth may fit together closely in a row. A single hole is drilled through the base below the apex of

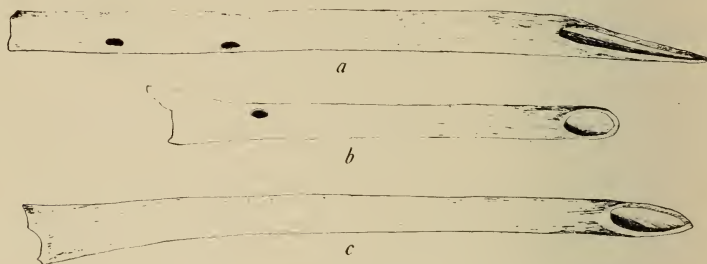


FIGURE 13.—Needles and picker: *a* and *b*, bone needle; *c*, bone needle or picker from Otago, New Zealand (John White Collection).

the tooth, through which was passed the cord binding the tooth to the handle. In one of the shark's teeth two holes have been noted, close together below the apex. The screwlike thread which appears in all these holes is due to the structure of that part of the tooth, and not to any peculiarity in the drill-point. The implements were probably used for cutting up flesh. See Pl. X. *j-m*.)

IMPLEMENTS USED IN FOWLING

According to Shand (56, p. 5) many birds were used for food including *pare* or *parea* (pigeon), *koko* (Maori, tui), *Komako* (Maori, makomako), *mehonui*, a species of the New Zealand *kakapo* (*Stringops habroptilis*), larger than a goose, and the *mehoriki*, a bird about the size of a small hen. The *kakapo* and the *mehoriki* were wingless birds, now extinct. Shand's account of Moriori methods of fowling is as follows:

There were also several varieties of the duck (*perer'*), which were snared in pools or ponds, or driven ashore in the moulting season (*perer' mounu*). They were driven from the lagoons into the rushes and coarse growth of the "clears," or open land, where large numbers were caught. They also had the *pakur'* (*Porphyrio melanotis*). The *mehonui* was usually captured on its sleeping place or nest, where several—six or eight—might be found huddled together, as the Morioris declare, like pigs in a bed. Having by observation found its sleeping place on the "clears," the Morioris made long tracks leading up to it, carefully removing any sticks or obstructions that might alarm the bird by cracking, and then by making a stealthy rush they pounced on and secured all in the nest or sleeping place. . .

The *mehoriki* was a very tame bird, but was only caught at certain seasons, being strictly preserved at others. The eggs were never eaten if in the least degree turned—children were always reproved for doing so. The birds were caught by preparing large traps with wide wings to them, between which they were quickly driven. . .

Native rats, called *kiore* were common to the island: but it is believed they were not eaten by the Morioris in which they differ from nearly all other Polynesians. The native rat was exterminated by the Norwegian rat introduced from a wrecked whaleship. The young of many sea birds before they were able to fly were used as food, such as *kuaka* (plover), young gulls (*ngoiro*), shags (*kuau*) and their eggs, *hopo* (the albatross), *hakoakoa* (mutton birds), *taiko* (a smaller-sized mutton bird of a slatey blue colour), *titi* (a still smaller size), *kupoupou* (divers), *reoreo*, *harua*, and other aquatic birds, all of which deposited their eggs and bred in the peaty soil of the main island before the introduction of pigs, dogs, and cats. The albatross, however, must be excluded, for they build on the outlying islets, to which places expeditions were made at the season just before the young birds were capable of flight. The young were potted (*huhua*) for use; after cooking in the oven (*umu*), the birds were buried for some time in the soil carefully covered over to preserve them for future use.

The traps alluded to above were evidently nets, for "*P'erer' mounu*" means "duck net." It seems probable that another snare in the form of a running noose was used to catch ducks over the water, as was done by the Maoris (56, pp. 164, 166 and p. 22). It is believed that no examples of either nets or snares have been preserved.

Another method of securing birds was by spearing them. The general name for a spear was *tao*, the butt being *pu*, and the point *uata*. A pigeon

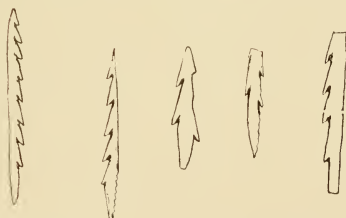


FIGURE 14.—Bone points of bird spears, from Otago, New Zealand (Dominion Museum).

spear was called *tao pare*, a tui spear *tao koko*, and so on (56, pp. 58, 59). We have no information as to the length of the wooden shaft, but it was probably much shorter than that of the Maori bird-spear, for Chatam Island has no tall trees. A number of barbed bone points of these spears are in collections and some are figured here. Sergeant Fougere, Canterbury Infantry, N. Z. E., informed me that he once found on Chatham Island a bird spear with a barbed wooden point, but it is possible that this was of Maori workmanship. Five types of bone points of bird spears are shown in figure 14, all from Otago.

IMPLEMENTS USED IN FISHING

NETS

As already stated, no examples of Moriori nets have been preserved. According to Shand (56, p. 9), the general name for fishing-nets was *kupenga*. Of these there were four principal kinds—seine nets, shrimp nets, scoop nets, and deep-sea nets. Seine nets (*kupenga-hao-ika*) were made of ordinary flax; shrimp nets (*kupenga-kowhiti*) were made of scutched flax (*muka*); scoop nets (*kupenga-titoko*) were made of common flax and furnished with a long pole for fishing from rocks in the surf. The deep sea net is described by Shand as follows:

The Moriori possessed a deep-sea circular *kupenga*, the same shape as the *kupenga-titoko*, suspended by four cords equally divided, on a *pirita* or rim of supplejack (*Rhipogonum scandens*). These cords converged and were tied to one long line, by which the net was lowered and hauled up. The bait was fastened firmly in a *tokere moumu*, a small meshed bag in the bottom of the pendant *kupenga*, and held in its position near the bottom. It was hauled up quickly when required. The Morioris did not appear to recollect any distinctive name for this class of net; it was made chiefly of *muka* twine, but sometimes of ordinary flax, and was exceedingly effective, catching sometimes 15 or 20 fish at a time.

It seems probable that Shand was wrong in describing this type of net as similar in shape to the scoop, for both Broughton and Johnston contrast them. Broughton (2, p. 87) says:

The nets of these islanders are very ingeniously made, terminating in a cod or purse; the mouth is kept open by a rim six feet in diameter, made from wood of the supple-jack kind; the length from eight to ten feet, tapered gradually to one; they were closely made and from the center, attached to the rim by cords, was fixed a line for hauling them up. They were made of fine hemp, two strands twisted and knotted like a reefknot, and seemingly very strong. They had also scoop nets, made of the bark or fibres of some tree or plant, without any preparation, and netted in equal meshes.

Johnston gives some additional details (60, 1914, p. 504):

We saw some fishing nets that were made of small two-strand lines evenly twisted and others that were made from the simple fibres of the plant, apparently without any other preparation than being made even, after being stripped off. Two of these were scoop nets, the

others were made somewhat in the shape of a bell, the width of the mouth about 6 feet in diameter, kept open by a large rim or hoop made of the supple-jack, the length 8 to 10 feet, tapering gradually to the small end, which was not wider than a foot and close netted. The hoop at the wide end had stones fixed to it as sinks, and from the centre attached to the rims by legs was a line for hauling it up in fishing.

It will be remembered that in describing the anchor rope of a Moriori vessel Broughton stated that it was plaited like French sinnet.

Eel-baskets (*punga*) are mentioned by Shand (56, p. 5), who states that eels were also killed in shallow water with a wooden sword or club. I am informed by Mr. F. C. McClurg that these clubs were shaped like a cutlas without the hand-guard. Armed with one of these the fisherman would slash the water indiscriminately along the shallow edge of the lagoon among the stalks of water-grass and reeds. Here the eels swarmed, and when one was hit the wielder of the *polu* knew it at once by the feel. The eel was secured and stung on a supple-jack. The Morioris cooked eels by gutting them and roasting them on sticks before a fire.

A net weight or stone sinker is shown in Plate XII, *f*. Grooved sinkers of this kind do not appear to be common, and such as occur may be of Maori origin.

Shand states (56, p. 5) that the net (*kupenga*) had entirely superseded the fish-hook (*matau*) and that the latter "fell into disuse at a remote period of their history." We know that the dead were often launched to sea holding a line with baited hook, but this might, if unsupported by other evidence, be regarded as a mere survival. Broughton's statement (2, p. 91), however, shows that Shand was mistaken on this point. "Several of them had their fishing lines, made of the same sort of hemp with their nets, fastened round them; but we did not see any of their hooks." In confirmation of this, Mr. John Renwick told me that he had seen an old Moriori named Heta use a bone hook baited with *paua*. He confirmed a statement made by other settlers that the Morioris twisted and looped the young sprigs of some of the native trees in order that they might grow into the right shape for hooks. Mr. Renwick also remembered seeing Heta bait a hook that had a straight wooden shank and a barbed bone point.

FISHHOOKS

The two classes of hooks—simple and composite—which are found in most of the groups of the Pacific were both used by the Morioris. A simple hook is one which is cut in a single piece, whatever the material may be. By a composite hook I mean one made of two or more parts which are held together

by fiber binding, by pins, or in some other way. Each of these classes may, in most regions of the Pacific, be subdivided into many types, and this is especially true of the composite hooks.

Simple fishhooks are illustrated and the descriptive terminology of them is given in figure 15.

The material used in all known examples of the simple hook is whale bone or whale ivory. Whale bone, except the finest and most compact pieces, can not be so finely worked up as human or moa bone, and for this reason Moriori hooks are, as a class, larger and clumsier than are Maori hooks. Wood was also used as a material for simple hooks, but no examples are known, nor are any in stone, though stone pendants were made in the form of simple fishhooks. (See Pl. VIII, g.)



FIGURE 15.—Diagram showing terminology used in describing fishhooks and sketch showing types of Moriori shank heads: *a*, simple knob; *b*, knob notched on top; *c*, slanting grooves; *d*, knob between grooves; *e*, notches; *f*, perforations.

Collections are very deficient in material illustrative of the methods employed in making fishhooks, but the tools used cannot have differed much from the Maori examples figured by Hamilton.⁸ It is evident from the form of Moriori simple hooks that the greater number have been made by the method indicated by Plate XI, *a*. The outline shape of a hook is sketched on a suitable piece of whale bone. This shape is then cut by grinding on a piece of sandstone or by means of a sandstone saw. The third step is to rub or grind out the inner curve in the manner indicated by Pl. XI, *a*, in which the outline of the shank knob has been sketched but the circle of bone has not yet been sawn through. The fourth step is represented by Pl. XI, *b*. The bone circle has been sawn through and the hook awaits only the finishing touches. By this method the Morioris pro-

⁸ Hamilton: Dom. Mus. Bull. vol. 2. Plate 26.

duced a hook the shape of which is characteristic, and rarely seen elsewhere. Its chief feature is the U-shaped inner curve and the resulting absence of vigor, and individuality in general appearance.

A different method of manufacture was probably used in the simple hooks of the variety exemplified by 8632, Pl. XI, *d*. It is difficult to believe that such a shape can have been produced without the agency of a drill. It is probable that the specimen figured in Pl. XII, *c*, was also made in this way. If so the third step would be accomplished not by a sandstone saw but by a drill. A series of holes are drilled along the inner curve and the tab thus isolated is knocked out. The concluding steps are the same as those of the previous process. This method was common in Otago. The type of Moriori hook resulting from it has much more individuality than the other, and is scarcely to be distinguished from some Otago hooks.

Methods of attachment to line are illustrated in figure 15. In only one of the hooks examined is the shank perforated, the stronger method of attachment by knob or groove or a combination of the two being preferred. Figure 16 shows examples for comparison.

The commonest form of ornament is serration. This form of decoration occurs in New Zealand, where Hamilton regarded it as an archaic characteristic. On one of the hooks in the Cambridge University Museum there is a decoration of three lines arranged like a broad arrow.



FIGURE 16.—Simple bone fish-hooks, from Otago, New Zealand (Dominion Museum).

Composite fishhooks are illustrated in Plate XII and in figure 17, *h*. Schurz, in his desire to prove that the Moriis are closely allied to the Australoid stock, is led to declare that their material culture is in some respects more primitive than that of the Maoris. In proof of this assertion he states, among other things, that the Moriis have only the "primitive" type of hook which is made in one piece. It is true that he figures the barbed bone point of a composite hook, but he describes it as the point of a bird-spear.

FISH GORGES

A bone fish gorge is shown in Pl. XII. It is believed that such a gorge was tied round the middle to a line and then secured parallel to it. A worm bait was then attached and gorge and line were used in eel-fishing. Figure 17, *a*, *b*, *c*, *d*

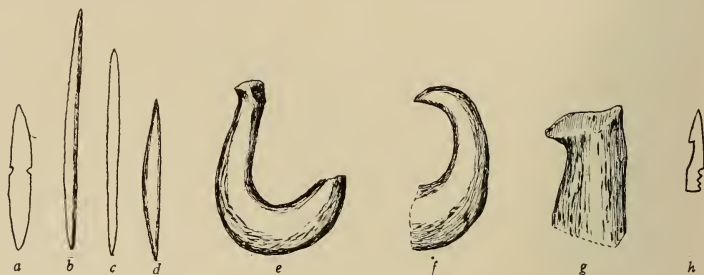


FIGURE 17.—Fish-hooks and gorges; *a-d*, bone fish gorges from Otago (Dominion Museum); *e-g*, parts of simple stone hooks from Easter Island (Fuller collection); *h*, barbed bone point of composite hook, length about $1\frac{1}{2}$ inches (38 mm.). (After Schurz).

illustrate similar gorges from Otago¹⁹, where they are common. Only one specimen has notches to hold the line.

ADZES, AXES, AND CHISELS

Von Haast, (25, p. 24) quoting a letter of Alexander Shand, says:

"*Toki*" is the term for all stone axes (adzes?) including the lesser kind, "*toki panche*," and chisel, "*whao*," or "*purupuru*," all of which were used until 1830 or even later. Mr. Shand observes that he has never seen, in fact doubts the existence of, any of the *toki-titaha*, or large axes used by the Maoris, and common also to New Guinea, used for cutting the top and bottom edges of a cut, the ordinary forms being used to cut out the chip by chipping sideways like an adze.

Percy Smith (30, p. 80) states that *toki* was the generic term for an adz. "The general name for the small adzes is *panche*." The chisel was called *whao*, and the cutting edge was called *mata*.

Moriore chisels closely resemble adzes of Type IX in shape, but they are very distinctly smaller, and they do not curve in their length, though the bevel gives the appearance of a curve. (See Pl. XXV, *h*, *i*, *t*, *k*, *l*, *m*, *n*, *o*.) They are usually made of a limestone which has been altered by heat and pressure, the color varying from cream to creamy-green. This type shown in figure 26, *d*, is very

¹⁹ Hamilton, loc. cit.

common in New Zealand where many varieties may be seen in all large collections. No old hafted example exists, so that we can only conjecture details of hafting.

The chisels are circular in section and they average about $3\frac{1}{2}$ inches in length. The method of attachment to the handle is not apparent. It is not known whether they were struck with a mallet or were driven by strength of hand. The statements of Shand and of Percy Smith that chisels were used for boring holes in wood must not be taken to mean that they were used with a rotary motion. Holes were cut in the same way as slots in wood are cut with modern steel chisels.

Elsdon Best (57, p. 19) suggests that *toki panche* may be a late Maori phrase denoting an iron or steel adz. Shand's evidence, however, confirms that of several of Mr. Best's informants, and proves that the phrase was an old one. "*W'hao* and *purupuru*," he adds, "are both generic (Maori) terms for chisels, and not descriptive or special names for certain kinds."

The adz, 14 inches in length, shown in Plate XVI, *a, b, c*, would be classed as unusually large even in New Zealand, where broad timbers for house-building or canoe-making are easily obtained. For what purpose it can have been used at the Chathams is difficult to conjecture. It is quite unsuited for felling trees, and could hardly have been put to any other purpose than dressing broad timber or dubbing out a canoe. But no Moriori woodwork that has been preserved approaches a size that would require tools as large as this one. It may perhaps be considered a relic of the period immediately following settlement on the island, when ideas appropriate to the old environment had not been much modified by the conditions of the new home. The stone from which it is made appears to be native to Chatham Island. The unfinished adz (Pl. XV, *d, e*) and the adz shown in Plate XVI, *d-i*, would also be considered large in New Zealand. Far larger than any of them is an unfinished adz in the collection of Mr. J. Ritchie. It is 20 inches long, its cutting-edge measures 7 inches, and its weight is 30 lbs. The front is slightly concave longitudinally. If this huge adz had been finished the various measurements given would have been reduced but little. The purpose of this implement can hardly have been other than to gratify the ostentation of some Moriori *ariki*.

MATERIAL

The material from which adzes and chisels were made is described by Von Haast (25, p. 24) as:

Lydian stone, aphanite, dioritic and basaltic rocks, for the greater part, doubtless, obtained on the Chatham Islands, though there are some specimens in the Canterbury Museum, received from that locality, of chert and of some other material which appear to have been imported from New Zealand.

Dr. J. E. Marr kindly examined for me 31 adzes from the Moriori collection in the Museum of Archaeology and Ethnology, Cambridge. His provisional determination shows that 9 adzes are composed of compact basalt; 9 of volcanic ash; 3 of "purplish ashy rock"; 2 each of basic lava with feldspar, vesic acid lava, and andesite; 1 each of compact vesic lava, vesicular basalt, "volcanic rock" and "sedimentary rock."

S. Percy Smith (31, p. 80), describing a set of tools found together at Opuhi near Owenga, says that most of them were made of close-grained volcanic rock. The material was derived, according to the Moriori account, from the bed of the Awananga stream, the Moriori name of which is Waitaheke-rere.

METHODS OF MANUFACTURE

The eight processes used in the manufacture of Maori stone tools were all used by the Moriori. They were: (1) hammering; (2) sawing; (3) flaking; (4) chipping; (5) pecking; (6) bruising; (7) grinding; and (8) polishing.

Hammering.—This term is used to indicate the first process in which the stone was broken out in fairly large blocks from the boulder, seam, or reef. None of the heavy hammers used in this process have been preserved in collections, nor do we know whether they or the lighter hammers used in processes 3-6 were hafted, as are some specimens from New Zealand. Neither do we know whether fire was used by the Morioris to break up large boulders, as was sometimes done by the Maoris.

Sawing.—By the Maoris this process was generally used to reduce *pounamu* (greenstone) roughly to the required outline, though it was also used occasionally in working other kinds of stone. One of the few instances in which the process is known to have been used by the Morioris is of the very greatest interest (Pl. XIV, *a*.) The material is unflawed but poorly colored greenstone and the value placed on greenstone by the Morioris is indicated by the care taken in cutting it. It was found under the roots of a tree which had been blown down, and its authenticity as a piece of Moriori work has never been challenged. No known example of Maori work of the same kind approached this in skill. It appears unlikely that sandstone could be reduced sufficiently thin to travel back and forward in so fine a scarf. It is sometimes stated that the Maoris used thin slats of wood in sawing stone, the cutting being done by quartz sand. But as the statement does not appear to rest on native authority, it cannot be cited to explain the nicety of

these scarfs. Two examples of the Moriuri cutter or saw are shown in Plate XIII, *c*. There is nothing to indicate whether or not they were set in a handle. Another example of this process of sawing is in the British Museum collection. The material in this case appears to be mud-stone or fine sand-stone.

Flaking.—This term indicates the process in which fairly long flakes were struck off the block which had been roughed out by hammers. (See Pl. XIV, *b*.) Length 318 millimeters ($12\frac{1}{2}$ inches). In Mr. Hodgson's collection, a specimen 203 millimeters (8 inches) long also illustrates this process.

Chipping.—This implies the removal from an edge of short, broad, small pieces. It may be noted along the edge of Plate XIV, *b*, and more clearly on Plate XV, *c*. It is scarcely to be distinguished from flaking.

Pecking.—This indicates the striking of blows on a surface with a pointed instrument, each blow leaving a small pit. It is a process that has evidently been used in making many Moriuri adzes, but is best illustrated by the unfinished weapon, Plate XV, *d*, *c*.

Bruising.—This term indicates the process by which the asperities left on a surface by flaking are pulverized and the surface is reduced to an even level. It is well exemplified in Plate XV, *d*, *c*.

Grinding.—This process removed the roughness resulting from the process of bruising. Blocks of sandstone were obtained on which the adzes were ground, and if a block was sufficiently large a hollow was worn in it, in which the adz was rubbed with a rotary motion. (See Pl. XIV, *c*, *d*. In this way, face, back, and sides were reduced to plane or curved surfaces. The sharpening of the cutting edge was effected by moving the edge back and forth along a groove. Such grooves are not rare, but happen to be absent from any of the grinders figured. According to Von Haast (25, p. 24) the grindstones (*hoanga*) were made of a coarse sandstone, generally found near the coast. Most of them had a flat surface, but were otherwise somewhat round, varying in size from 7 to 12 inches. The "*hoanga*" was placed flat on the ground, and the implement was sharpened by rubbing it back and forth on the stone, kept wet with water. Von Haast states that numbers of these "*hoangas*" are to be seen at the islands. The operation was tedious in the extreme. Travers (20) states that these hollowed grinding stones were often used as dishes for melted fat or for gravy. S. Percy Smith (31, p. 81) says:

Mr. Shand has been good enough to supply me with the following "grinding song" of the Moriuri, which they sang as they performed the laborious and tedious process of reducing to shape the various stone implements in daily use. Much of the spare time of the men was devoted to this work. Mr. Shand has promised to furnish a literal translation, but before

doing so desires to consult the few old men still alive as to the exact meaning of some of the words:

Ko tch oro toki o Hine-tchu-wai-wanga

First-Voice.

Matchu aha?
Matchu aha?
Matchu aha?
Matchu aha?
Matchu aha?
Matchu aha?
Matchu aha?
Matchu aha?
Matchu aha?
Matchu aha?

Second Voice.

Matchu ka kimi.
Matchu pokai.
Matchu amio.
Matchu ki hahau.
Matchu ka kuti.
Matchu moto rere.
Matchu takoto.
Matchu ka ta.
Matchu ka ngawha.
Matchu hapurangi.
Matchu titore katoa.

Chorus: Oreia, ora toki, oro toitoi wa kae, e, e, ra koe, Kauae ro ra koe.

Kauae ro ra, koe, Hine—tchu-wai-wanga

Oreia, ora toki, oro toitoi wa kai, e, e, ra, koe.

Kauae ro ra koe.

Kauae ro ra koe.

The meaning may briefly be given as this: The first voice asks what the cutting of the stone is for, the second voice replies that it is to shape the tool, to sharpen it and describes the flying of the chips, the splitting of the stone, and so on. The chorus appears to address the operator in terms of encouragement, urging him to continue his work with an appeal also to the goddess of axe-sharpening. Hine-tchu-wai wanga is the Hine-tu-a-hoanaga of the Maori, the goddess or deified ancestress who is always connected in some form with the production of stone axes.

The author then gives details of the goddess as she is known in New Zealand and Rarotonga. Much additional information is given by Mr. Elsdon Best (57).

Polishing.—Some Moriori adzes are well polished, but we have no information as to how the polish was produced. Whether the Morioris used either wooden burnishers or oil, as the Maoris did, has not been recorded.

USE

As already indicated it was Shand's opinion that all the larger stone implements from the Chathams were used as adzes, and that the stone axe—*toki-titaha* of the Maoris—was never used by the Morioris. This denial must, however, be received with reserve, for many students once doubted the existence of the axe among the Maoris. It was only after considerable research that Mr. Best was able to demonstrate its existence in New Zealand, though we now know that in Taranaki, and probably in other districts, it was in common use. If any of the

stone implements from the Chathams were hafted as axes they are probably to be found in Type IV, in which the cutting edge results from the intersection of equal bevels on front and back. This type of implement was sometimes hafted as an axe in Taranaki, and it seems probable that every Maori axe was of that type.

Mr. R. McClurg told me that the Moriors, believing that long exposure to sunlight impaired the quality of the stone, buried their adzes under the floor of the *whare* when not using them. This fact probably accounts for the hoards which are occasionally dug up, and one of which is exhibited in the Otago University Museum.

CLASSIFICATION OF MORIORI ADZES

The classification here adopted was worked out at the Museum of Archaeology and Ethnology, Cambridge, on the basis of the Museum collection of Moriordz. This collection numbered between fifty and sixty specimens. In the course of the work several visits were paid to the British Museum, where the collection of adzes is much larger. There were also available photographs of the adzes in the Dominion Museum, the Canterbury Museum, the Auckland Museum, the Bernice Pauahi Bishop Museum, and in the private collections of Mr. T. V. Hodgson, and Mr. Kinsey. Some time previously I had examined the collections of the Otago University Museum, the Canterbury Museum, the Dominion Museum, and the Napier Museum, and also that of Mr. Hodgson. It is believed, therefore, that the classification is based on a sufficient number of examples, probably numbering upwards of 500.

It is believed, however, that the discovery of fresh examples may modify it in some respects, probably by the addition of one or more types. The types that have been erected correspond to fairly well-marked groups of adzes, the shape and size of each group being determined no doubt by the use to which it was put. As to what that use was for each particular implement we can only conjecture.

There are only two characteristics which belong to all adzes—poll and cutting edge. The type to which an adz belongs is determined in the following classification by the shape of the implement between these two extremities and this in turn is determined by the cross-section of the adz. The shape of the cross-section has therefore been taken as the basis of the classification that follows, but another characteristic has also been made use of—namely, outline. Outline is a difficult feature to define, but its use is made necessary by the fact that the cross-section may vary in shape at different points in the same adz. Subsidiary characters which help in determining to which type an implement belongs are presence or absence of grip, nature of bevel, and relative length of cutting-edge.

Another method of classification might have been made, based on use. Unfortunately, however, we have so little information under this head that any classification based on it would be almost entirely conjectural.

There are two classes of adzes which do not fall within the classification adopted. The first class comprises those that are intermediate between types and includes perhaps 10 per cent of all examples. The second class is composed of abnormal specimens, the shape of which seems generally to have been determined by the shape of the stone from which they were made.

DESCRIPTIVE TERMINOLOGY OF ADZES

The first ethnologist to realize the need of a descriptive terminology when describing Polynesian adzes appears to have been Mr. Elsdon Best (57). His terms are illustrated in figure 18.

In addition to the terms set out in the diagrams, Mr. Best makes frequent use of the term "blade." He has not defined the word, but it is clear from his use that "blade" describes that part of the stone tool which is concerned immediately with cutting, while "butt-end" describes the opposite end of the tool—the part immediately concerned with hafting.

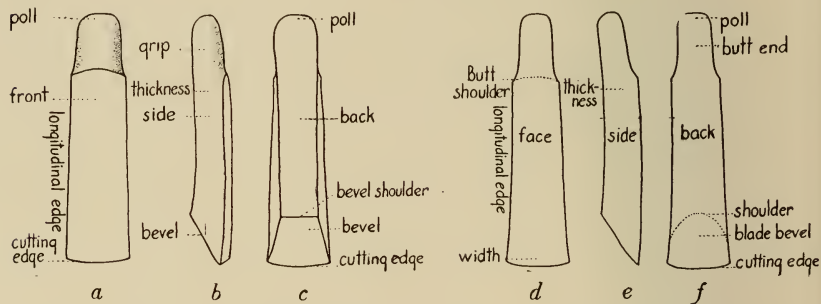


FIGURE 18.—Diagram showing terminology of adz blades, *a*, *b*, *c*, showing that adopted for this paper, and *d-f*, that used by Elsdon Best.

Mr. Best's terms mark a great advance in the history of the study of stone adzes, axes, and chisels in the Pacific. It is only the conviction that the terminology may be simplified that has led me to suggest the terms adopted in this paper.

A comparison of these terms with those used by Mr. Best will show that I have abandoned his "blade," "butt-shoulder" and "face." "Blade" was abandoned because it already has a well-defined and useful but a quite different meaning in

ethnographical literature.²⁰ I have substituted "front" for "face" because the latter term has an extremely useful general meaning and may well be left available for that usage. "Butt-shoulder" I omit as unnecessary.

"Grip," the one quite new term, will probably meet with criticism. My definition is: "The grip is constituted by the shaping of front and sides to hold the binding by which the adz is attached to the haft. It is a feature, not a region, and is absent from several types of adz." Dr. H. S. Harrison, to whose criticism I am much indebted, would substitute "tang," and in this he is supported by the authority of Brigham and of some passages in Best. As, however, "tang" already has a rather specialized sense, I have preferred to retain "grip." Dr. Harrison would also prefer "proximal end" in place of "poll." I prefer to retain "poll" on account of its brevity. In measuring the cutting edge the length of a straight line across the implement has been taken, disregarding the curvature.

HAFTING

Moriori adz hafts and the method of attaching hafts to blade are illustrated in Plate XV, *a*, *b*, *c*, and the terminology used in description is shown in figure 39.

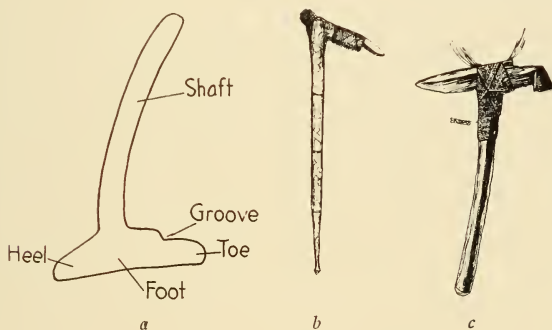


FIGURE 19.—Hafted adzes: *a*, diagram illustrating terminology of hafted adzes: *b*, hafted adz from Niue Island (54 fig. 5 *c*); *c*, hafted adz from Tahiti (54, fig. 134).

For comparison an adz from Niue (fig. 19, *b*) and one from Tahiti (fig. 19, *c*) are shown.

²⁰ See, for example, Handbook to the ethnographical collections, British Museum, p. 17.

TYPES OF ADZES

In the classification proposed by me 9 types of adzes are defined. Types I-IV, appear to be fundamental and types V-IX may perhaps have been derived from them.

Type I represents an adz which is more thoroughly characteristic of Polynesia as a whole than is any other class of objects. (See Pls. XVI and XVII, and fig. 20.) Close parallels to this type can be found in every island group in Polynesia, though each group has developed some characteristic feature or features. Thus the angle formed by the proximal and distal parts, occasionally seen in New Zealand (fig. 20, *c*) and the Chathams (Pl. XV, *d*, *e*, Pl. XVI, *d*, *e*, fig. 20, *f*) is extremely common in Hawaii. The most characteristic feature of this type of Moriori adz is undoubtedly the two knobs at the poll, a feature seen in five of the

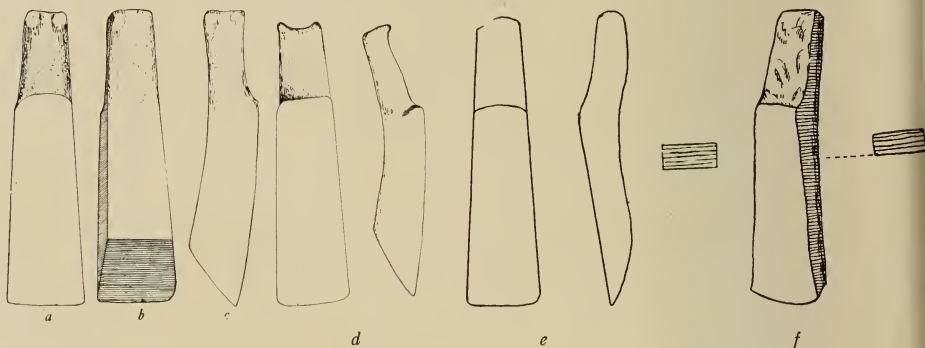


FIGURE 20.—Adzes, Type I: *a-c*, views of an adz from Otago, New Zealand, length about 11 inches (British Museum); *d*, front and side views of an adz, length about 10 inches, from Nassau Islands (Australian Mus. Rec. Vol. 9, Pl. 39); *e*, two views of adz from Canterbury, New Zealand (38 Pl. 206, No. 4); *f*, Hawaiian adz (54, fig. 133 *k*).

six finished adzes that are figured. These poll-knobs are not restricted to the Chathams, but appear, though in a less pronounced form, in adzes from the South Island of New Zealand, of which region they are thoroughly characteristic.

More striking than these South Island parallels is one from Nassau Island, northwest of the Cook Group, which is shown in figure 20, *d*. Its measurements²¹ are as follows: length 12 inches, cutting-edge $3\frac{3}{8}$ inches, width at poll $1\frac{3}{4}$ inches. Thickness at bevel shoulder 2 inches. Weight $5\frac{1}{4}$ lbs. Material, light grey vol-

²¹ Australian Mus. Rec., vol. 11, p. 200, 1916-17.

canic tuff. Were it not for the absence of canoes at Chatham Island it would be difficult to refrain from claiming this as Moriori work.

I cannot agree with Mr. Best that the hollow between the poll knobs has been rasped out with a stone rasp. It seems to me much more likely that the stone was reduced by continuous pecking. The method of hafting must have been quite different from that of Plate XV, *a*, and probably resembled that of figure 19, *c*.

The adzes of Type II are characteristically Polynesian, and are represented in the Polynesian collections of every large museum. Setting aside their material, they might well have come from any island group in Polynesia or its border regions. In some respects they resemble Type I but there are important and obvious differences. The absence of a defined grip, the bevel without the bevel shoulder, and the general thinness should be noted. (See Pls. XVIII and XIX.)

Type III is common in the South Island of New Zealand, but is rare in the North Island. (See Pl. XX and fig. 21.) Figure 21, *d* indicates one of the Maori methods of hafting, but is modern, and not above suspicion. Figure 19, *c* indicates another method of hafting, the method invariably adopted in Tahiti for

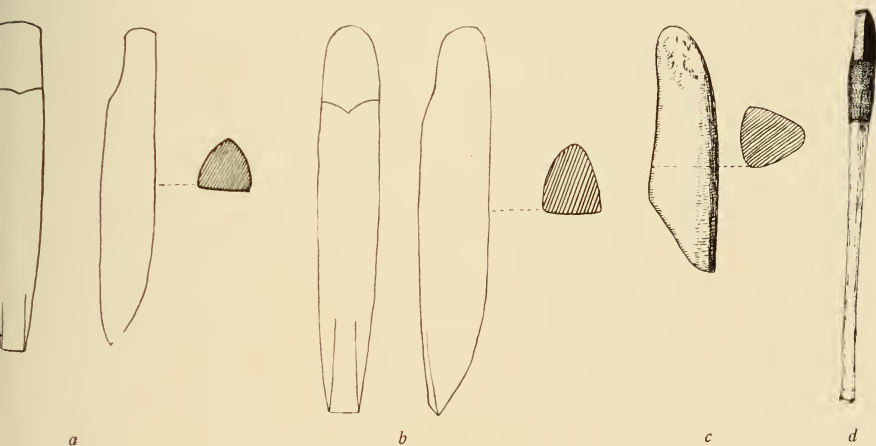


FIGURE 21.—Diagram of adzes, Type III: *a*, from the northern part of South Island, New Zealand—front and side views; *b*, from Tahiti (Royal Scottish Museum); *c*, from Easter Island (54, fig. *g*); *d*, diagram showing a Maori method of hafting adzes of Type III (after Best 57, pl. 42).

this type of adz, and one which was probably used in New Zealand and at the Chathams.

Adzes of Type IV have front and back evenly curved to produce the cutting edge, which when seen from the front is straight. (See Pl. XXI, *a-d* and figs. 22, *a, b*), but when seen from above or from below is curved convexly. The terms front and back are not appropriate in this type, as both faces are so similar that in typical examples they can scarcely be distinguished. It is sometimes difficult to distinguish them from adzes of Type II. Implements of Type IV are common at the Chathams. Dr. Brigham records it in Hawaii and it is not uncommon in New Zealand, but I do not know of examples from other parts of Polynesia. The commonest type of adz-axe in New Guinea is closely allied, and allied forms appear in northern Melanesia. Figure 22, *b* after Best (57, Pl. X, No. 84) represents a New Zealand example.

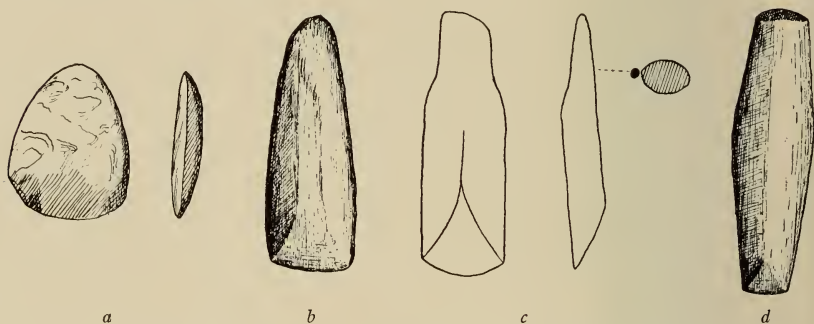


FIGURE 22.—Drawings of adzes Type IV and Type V. *a*, front and side view of adz, Type IV, from New Caledonia (54, fig. 10 *b*); *b*, Type IV (57, pl. X, No. 84); *c*, diagram of front and side of adz, Type V, from Otago, New Zealand (38, pl. 208, No. 4); *d*, drawing of adz, Type V, from New Zealand (57, pl. 17, No. 91).

The adzes of Type IV may have been hafted in the manner indicated in Plate XV, *a*, but the convex curve of the cutting edge would make adzing difficult and inefficient. It is more likely that they were hafted and used as axes, for the ordinary steel ax has a cutting edge formed by the intersection of similar faces, is straight when seen from the front, and is curved convexly to prevent "binding" in the wood. In Taranaki tools of this type were hafted on handles similar to that shown in Plate XV, *a*, except that a slot was cut vertically in the foot into which the implement was inserted with the cutting edge running parallel to the handle. In this position it was secured by flax binding. In the East Coast districts the stone

blade was hafted as an ax but in another way, as is indicated by the figure given by Best (57, Pl. XI,II).

Type V would be regarded as a small variety of Type I, were it not that adzes of the same type are very characteristic of several other groups in Polynesia. It differs from Type I in smaller size, the absence of poll knobs, the undeveloped grip, and the greater convergence of the sides towards the poll. The hafting appears to have been like that of figure 19, *c*.

Type V (Plate XXI, *c-h* and figs. 22, *c, d* and 23) occurs in New Zealand, but is rare. Figure 23, *b* represents an allied form from the Cook Group. Figure 23, *a* (Tahiti) and figure 23, *c* (Hawaii) indicate the wide distribution of the type.

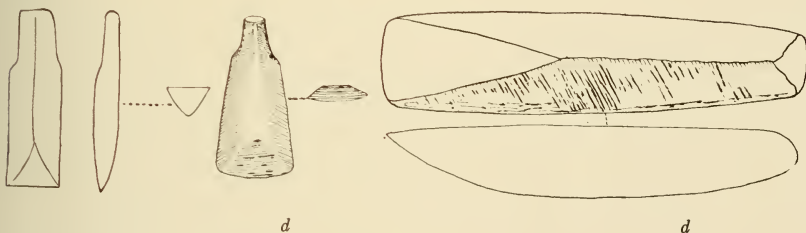


FIGURE 23.—Diagrams and drawings of adzes, Type V: *a*, front and side view of adz from Tahiti (Royal Scottish Museum); *b*, from Cook Islands (54, fig. 133 *c*); *c*, two views of adz from Hawaii (38, pl. 20, No. 4).

Type VI may be regarded as intermediate between Type I and II. Adzes of Type VI are represented in Plate XXII and described in the legends. With Type VI should be placed a Maori adz (fig. 24, *a*) described by Best. (57, p. 212, Pls. 22 and 23.)

The Maori stone adz is $13\frac{1}{4}$ inches long, $3\frac{3}{4}$ inches wide across the cutting-edge, $1\frac{1}{2}$ inches across the poll. Thickness $1\frac{3}{8}$ inches at the shoulder, and practically the same to within 3 inches of the poll. Weight $5\frac{1}{4}$ lbs. The back of this tool is about $\frac{1}{2}$ inch narrower than the face, a peculiarity noted in a goodly number of the well-finished class of stone adzes, and which adds much to the symmetrical appearance of the implement. The face is slightly convex transversely, and markedly so longitudinally. The back is somewhat concave lengthways, and the sides straight. The blade is $3\frac{1}{4}$ inches long from the cutting-edge to the well-marked (*sic*) shoulder, and carries an angle of 50° near the cutting-edge, easing to 40° or somewhat less on the upper part of the blade. The back of the blade is slightly convex transversely, and, as is usual, the sides are convex in a like direction. Cutting-edge keen and almost flawless. This implement is well finished, ground and worked to a smooth polished surface on all parts exposed when hafted.

The type is common in New Zealand and is probably common in other parts of Polynesia also, though I am not able to figure examples.

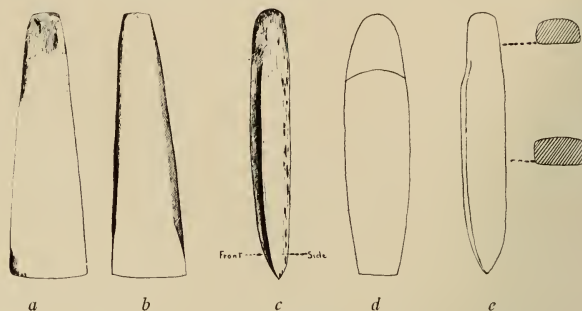


FIGURE 24.—Adzes, Types VI and VII: *a-b*, sketches of Maori adz, Type VI (57, fig. 43); *c*, Maori adz, Type VII (57, pl. 5, No. 20); *d-e*, drawings of adz, Type VII, from Tahiti (Royal Scottish Museum).

The frequency with which Type VII occurs in New Zealand is indicated by the numerous examples which Mr. Best figures. Figure 24, *c* is 11 inches long. According to Best the cutting-edge is in the axial center when viewed sideways (59, p. 221). Figure 24, *e* represents an example of this type from Tahiti.

Adzes of Type VII are shown in Plate XXIII, *a-d*, and in figure 24, *c, d* and Type VII may perhaps be regarded as intermediate between Types II and III. It does not appear to be constant and easily assimilates characters from other types. The nature of the grip indicates that hafting was by the same method as in figure 19, *c*. It may be conjectured that the method of figure 21, *d* was also sometimes followed.

Type VIII is based on a single specimen but, as it is well represented in the South Island of New Zealand, there can be no doubt of its reality.

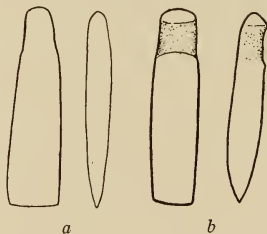


FIGURE 25.—Outlines of two adzes from Otago, showing front and side views (Otago University Museum): *a*, Type IX; *b*, Type VIII.

The use to which this type was put is not known, but the great thickness of the implement and the development of the grip indicate that the work performed must have been heavy. The absence of large timbers at the Chathams therefore accounts for the rarity of the type there.

Type IX, like Type VIII, is at present represented by a single Moriori example. But it is well represented in New Zealand, where it seems to have been used as a punch in the felling of big trees. The same explanation for its rarity in the Chathams may be given for this type as for Type VIII.

Class X includes a series of adzes of which the use is unknown. I do not think it possible that such tools as those shown on Plate XXIV can have been used as chisels for cutting holes in carved woodwork. The fact that Plate XXIV, *e*, is

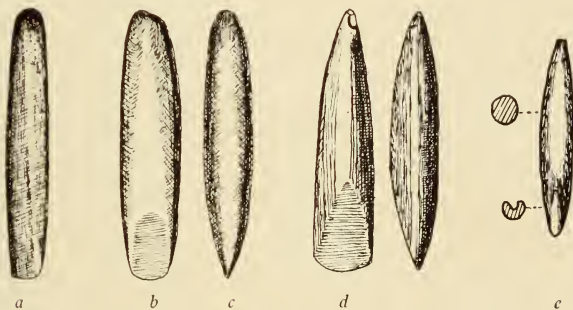


FIGURE 26.—Drawings of adzes, Type X: *a*, from New Zealand (57, pl. No. 61); *b*, *c*, from Fiji (54, fig. 10, *h*)—front and side view; *d*, from Solomon Islands (54, fig. 10, *i*)—front and side view, *e*, chisel from Otago, length 3 inches (Skinner Collection).

curved longitudinally is proof that it was designed to be hafted as an adz, and not axially. *d* and *f* may have been hafted either as axes or as adzes.

Best (57, p. 281) describes a Maori form (fig. 25, *a*):

Length $8\frac{1}{2}$ inches, width in center $1\frac{1}{4}$ inches, narrowing to $\frac{3}{8}$ inches across the cutting-edge and $\frac{3}{4}$ inches at the butt end. The cross-section is not rectangular but very much rounded; indeed, it approaches a cylindrical form. Whether it was helved as a chisel or as an adz, it is impossible to say.

This form is much commoner in the Otago district than elsewhere in New Zealand. A very similar form exemplified by figure 26, *b* is characteristic of Fiji, where it seems always to have been hafted as an adz. Figure 26, *d* represents a similar type from the Solomon Islands.

UNCLASSIFIED ADZES

The adzes represented in Plate XXV, *a-g*, do not fall easily into the types previously distinguished. They have been selected to indicate a tendency existing among Moriori adzes to assume what are usually described as Melanesian forms. The same tendency exists in New Zealand, where it appears to vary in intensity in different districts. There can be little doubt that it is stronger in the North than in the South Island. It is possible that there may be similar forms among the adzes from different Polynesian groups, but the absence of published data makes it impossible to come to a decision on this point.

The function of the ridge or shoulder shown in Plate XXV, *b, c*, is not known. One suggestion is that the ridge is designed to throw the chip, but in all the adzes that I have examined the ridge is much too far back to have any effect on the chip. In dressing timber with a stone adz the chip must have been almost invariably far smaller than when a steel adz is used. Another suggestion is that the ridge rested against the toe of the haft, thus bracing the adz more firmly in the hafting. It is probable that this was the purpose of the ridge in a number of the adzes having this characteristic. In some examples, however, the ridge appears to be purely ornamental.

Whatever the origin of this feature, it appears to be more common among Moriori than among other adzes. This fact is perhaps due to the influence of the strongly marked proximal boundary of the bevel as it exists in Type I, a feature much less strongly marked in other parts of Polynesia.

FLINT OR CHERT KNIVES (*MATA*)

The term *mata* was applied by the Morioris to flint, as well as to their stone knives.

Von Haast (25, p. 24) gives the following information, derived from Shand, about Moriori stone knives:

The Morioris also used flint or *mata* which they split into thin irregular, wedge-like shapes, as knives, there being no volcanic glass (*tuhua*) obtainable in any quantity, although a reef of it is known to exist under water at the south-east corner of the island at Manukau. The micaceous clay slates or argillaceous schists, with layers of quartz, occurring on the north coast of the main island were used for making the *patu* (club) and were also employed in the same way as the *mata* or flint, though their edges cannot be made so sharp as those of the latter. Both were used, with or without handles, in cutting up grampus or any other variety of whale for food, the blubber of which was considered a great relish by the Morioris.

The knives and the Moriori method of hafting are illustrated in Plate XXVI.

No hafted examples of flint knives have been recorded from New Zealand, though some of the Otago flint implements, also called *matā*, approach the Moriori

matā in shape. Figure 27, b represents a hafted Easter island *mata* in the British Museum collection. With the Easter Island type, Seligman²² compares an obsidian implement from British New Guinea (fig. 27, a). He says:

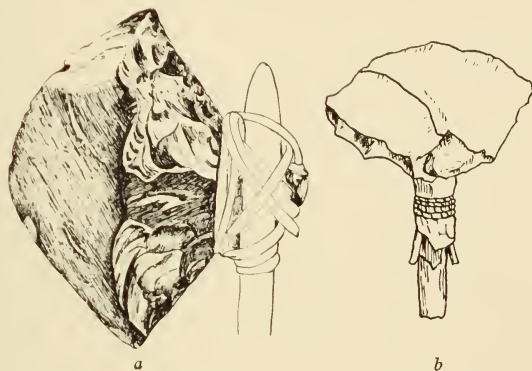


FIGURE 27.—Hafted implements: a, obsidian blade with modern hafting from British New Guinea (after Seligman); b, hafted *matā* from Easter Island (27 a, pl. 3, No. 5).

The Easter Island and New Guinea blades approach each other in shape, and both are tanged. They thus share their most important features, and although the Papuan specimen is vastly better made than any of the Easter Island examples in the British Museum, they all have this in common, that the tang and the part of the blade nearest the tang have been worked by the removal of a large number of small flakes, while the remaining part of the blade has been shaped by a different technique. The resemblance is indeed strong enough to suggest a definite relationship, a suggestion which is supported by the fact communicated to me by Professor von Luschan that Dr. Finsch brought back with him from his New Guinea expedition an obsidian blade of the regular Easter Island type. In other words this blade found in Papua may well be a relic of the period when the ancestors of the Polynesians were passing through Melanesia to reach their homes in the Eastern Pacific.

THE MORIORI DRILL

As no example of Moriori drills has been preserved and there is no information whatever concerning them, a judgment as to the kind of drills used must depend solely on the evidence of the holes they bored. The Moriors seem to have been less expert at drilling stone than were the Maoris, for only one of some eighty stone weapons examined had a bored hole in it.

This lack of drill work is due to a distaste for drilling rather than to difficulties in the material, as is proved by the fact that none of the whalebone

²² Seligman, C. S., *Man*, No. 91. 1915.

examples has been perforated, and the unfinished flute that has been figured the stop has been cut, instead of being drilled. It has been pointed out, also, that only one out of some fifty fish-hooks examined affords any evidence of having been drilled out of the raw material. The drilling of the bone pendants, therefore, though not so good all round as Maori work, is still better than might be expected. In some specimens, as a preliminary step, a line has been cut in the bone to hold the drill-point. In one or two examples the bluntness of the drill-point is indicated by circular scratches outside the area of the hole.

The Maoris used a primitive form of the pump-drill in which the two cords were not attached to a spar but were held one in each hand. It is to be supposed that this was the form of drill used by the Morioris.

Pl. XXXII, *b* represents an implement that Percy Smith (31, p. 81) describes as "a pointed borer that appears to be made of limestone, though it has somewhat the appearance of fossil bone. The marks made by the *toki* in chipping it into shape are still clearly visible." Mr. T. F. Cheeseman also describes it as a stone drill-point or borer. As against these suggestions it may be pointed out that no other example of such a type of drill has been recorded in Polynesia. In the second place the point shows no sign of ever having been used with a rotary motion. If the implement was not used as a borer, its true use is difficult to conjecture. It may have been used as a fish-killer, or it may have been used as a flax beater. Length 16 millimeters ($6\frac{3}{4}$ inches).

WEAPONS

The Moriori traditions are full of references to fighting which seems to have been as whole hearted a kind as that recorded by the Maoris in their traditions or in the histories of their wars with the European colonists. The isolation of the group may, however, have sapped the physical vigor of the race and impaired their fighting powers. Shand (56, p. 3) relates as follows:

The Morioris do not appear to have had the same amount of energy or vivacity as the Maoris, nor were they an aggressive or warlike people, although somewhat quarrelsome among themselves. . . . They organised expeditions (*ka ranga i tanu*, Maori *taua*) against their adversaries, in which they went through and recited incantations for the success of their party, just as if in actual warfare. All fighting, however, had been forbidden, and had ceased since the days of their ancestor Nunuku, shortly after their arrival in the island about 27 generations ago, since which time they have been restricted to the use of the *tupurari* (quarterstaff) only. It was ordered by Nunuku that man-slaying and man-eating should cease forever—"Ko ro patu, ko ro kei tangata me tapu toake"—and that in all quarrels the first abrasion of the skin, or blow on the head or other part causing any blood to flow, was to be considered sufficient and the fight, so-called, was to cease. . . . But although the quarrel ceased for the time it did not prevent the injured party endeavouring at a later period to get satisfaction for his "broken

head." Nevertheless, apart from such disturbing incidents, their general life was a very peaceable one.

In another passage, however, Shand does not seem by any means so sure of the entire absence of fighting. He says (51, p. 151):

One or two instances are recorded in which the Karewa Moriors seized and took captive for a short time the women of the north-east district, but they returned them shortly afterwards to their homes. Whether any were killed at such times by accident appears uncertain, although there is an indistinct story of such occurring.

A very different impression of the warlike character of the Moriors is left, however, by the accounts of the discoverers. (See Broughton's report quoted on pp. 24 and 25.) Johnston's account of the ferocity of the natives corroborates Broughton's. (See pp. 26 and 28.)

The impression left by these accounts is the same as that left by the traditions which are largely composed of tales of battle, of murder, and of cannibal feasts. We are told of the preparations of the *tauu* (war-party, cf. Maori, *taua*); of the *karakii* (incantations, cf. Maori *karakia*) chanted by the *tohunga* (priest, cf. Maori, *tohunga*); of the clash in battle and of the shout "My fish," by the warrior who slew the first of the opposing party. On a hill near Wharekauri the earthworks of a Mori or *pa* can still be seen. This is Rangitihi, besieged in ancient times by Moe, who captured it, killing and eating the garrison.

The methods of individuals as seen in Broughton's account correspond with Maori methods no less exactly than do those of the war-party. The traditions also relate the dismemberment with flint knives of the bodies of the slain, the cannibal feasts, and the bringing home of the fallen warrior's head. All these things lead to the conclusion that the Mori ors were more warlike before the Maori conquest than is usually supposed, and suggest that the Mori ors unduly stressed their own peaceable dispositions when accounting for the completeness of their defeat.

PROJECTILES

The use of bow and arrow or of spears thrown with a whip lash is not recorded. Only one record of stone-throwing has been made (56, p. 126), and this, as might be expected from what we know of fighting in other parts of Polynesia, was in a canoe encounter. Spears, the general name for which in the Chathams was *tao*—the same word as used by the Maori—were thrown by the hand (56, p. 59) and were warded off. The commonest type of Maori spear was sharp at both ends, and this seems frequently to be referred to in Mori or traditions, though the sole specific reference to it is Johnston's "The spear we got was about 6 feet long, so thick that a man could easily grasp it in the middle, tapering to a sharp point at each end." (60, p. 506.) Shand (56, p. 9) also mentions a kind of spear called *kaukau*.

Two types of Maori weapon which in the past have almost invariably been classed as spears, namely, *hani* and *poutchenua*, should be classed as clubs, and are related to the paddle-clubs of other parts of the Pacific. They are characterized by a thin blade with a rounded end, by a grip which is the narrowed lower part of the blade, by carving below the grip, and by a pointed end. It is this last named feature, used for dispatching a prostrate enemy, which is responsible for the misnomer "spear." To this Maori type of light, elongated club probably belongs the Moriori weapon called *tupurari*, which Shand describes (56, p. 9), as follows: "A pole about eight or ten feet long, and made either of heart of *akeake* or *houhou* [wood] which they used somewhat as a quarterstaff. . . . From their account it was used solely to strike downwards with, and not to thrust." Broughton says: "Some of their spears (*sic*) were about 10 feet, others about 6 feet in length, one or two of them were new with carved work towards the handle." It may be suggested that the longer of these two kinds is Shand's *tupurari*, that the shorter is cognate with the Maori *poutchenua*, and that both probably belonged to the same general type. This is borne out by Johnston, who says that some of the spears were very long, and pointed only at one end without much neatness. A further piece of evidence is supplied by one of the traditions (56, p. 59), "Tama threw (? struck with) his spear, first the butt (*pu*), then the point" (*mata*).

Daggers.—I have to thank Mr. Henry Balfour (63) for permission to figure his drawing of the only known Moriori dagger. (See Pl. XXX, *c*.) The following is his description of it:

A well-made dagger of bone, apparently that of a large cetacean. It is 22.5 c. m. in length and is made of a single piece. The blade tapers gradually to a point and is lozenge-shaped in transverse section, the obtuse angle being more clearly defined on one surface than on the other. At its junction with the grip the blade is shouldered. The grip is circular in section and terminates in a large, rounded pommel, which is separated from the grip by a groove forming a neck. It is a carefully made and shapely weapon of a type hardly to be expected from this locality. It is without doubt the actual specimen referred to by Tregear (26, p. 79), who says: "Tapu assured me that the weapon was known and used by the ancient Moriori."

The adz must be included among the weapons. Shand (56, p. 9) says: "The *toki*, or stone axe (adz) was also used in old time as a weapon of offence." Referring to the *Toki a Rei Meitci* of tradition he says (p. 99):

This was a celebrated weapon brought by Moe, grandson of Horopapa, one of the Rauru tribe, in the Oropuke canoe to the Chathams. It was handed down to their descendants and was last seen by one of the old men, Aarona Takupuhanga, about seventy years ago [about 1810] on the burial of one of their chiefs, with whom it was interred at Owkata. Judging from his account and that of others, it was not a *toki*, but a *patu* or, from the old men's description of the color, a *mememere* of greenstone.

It seems probable, however, that the weapon was really an adz and that it is represented by Plate VIII, *k*.

STRIKING WEAPONS

Short striking weapons made of stone, bone, or wood are not mentioned at all in the traditions, though stone examples are extremely numerous in collections. Shand (56, p. 9) says that there were certain stone weapons—the *okeva*, a curved flat stone club, or weapon, of which some specimens are still in existence and the *pohatu taharua*, a stone weapon shaped like the Maori *mere* and made of basalt or schist, but chiefly of schist. "Some years back there were numbers of these scattered about everywhere. There was also *patu-paraoa*, made of sperm whalebone, but with a notch and round hole on the back edge, precisely like those of the Maoris." Von Haast (25, p. 24) says: "It appears that the term '*patu*' (to kill) was applied only to the *okeva*, in fact Mr. Shand doubts whether it is a correct term at all, but rather one adopted by Europeans and retained as a term generally understood." He restricts the term *okeva* to "a peculiar bill-hook shaped war-club," and uses *pohatu taharua* (two-sided stone) to designate all other forms.

I have examined some eighty of these short striking weapons, all except five of which were made of stone. The exceptions, four of which are figured, were made of bone, while no wooden examples were noted. Of Shand's *patu paraoa*, "made of sperm whalebone, but with a notch and round hole on the back edge precisely like those of the Maoris," not a single example was seen. In the British Museum collection there are examples of this type described as Moriori, but they are undoubtedly of modern Maori workmanship and may be attributed to the invaders or their descendants.

The use of the striking weapon is not recorded. The Maoris seem to have used it not for a downright club blow, but with a thrust, with almost exactly the action of a round-arm bowler at cricket, and the number of Moriori weapons in which the distal edge is straight justifies the conclusion that the Morioris used the weapon in the same way. In explanation of these peculiarities of shape and use Pitt-Rivers long ago suggested that the type was a specialization of the adz.

METHODS OF MANUFACTURE

The methods of manufacture employed when the material used was micaceous schist is illustrated in Plate XXVII, *a*, *b*. Large blocks were quarried out or were broken from the reef and were reduced by splitting roughly to the required thickness. They were then dressed down to the outline of the required shape, a stage represented by Plate XXVII, *a*, *b*. If the outlines were then thought suitable the weapon would be shaped and finished by grinders and polishers such as those shown in Plate XIV, *c*, *d*.

Von Haast comments as follows:

It is clear that the same process of polishing the uniformly hard material, from which the Morioris made their "tokis" or axes, could not be applied to these war clubs, and that the principal work of forming them consisted in the chipping process. When the proposed form was thus obtained, they proceeded to give the war clubs some little polish, as much as was possible without removing the loose argillaceous or micaceous matter between the quartz layers. In some cases the quartz layers were so very thin and intimately blended with the rest, that a far greater polish could be given to the material worked upon.

Another method of manufacture is shown in Plate XXVII, *c, d*. The igneous rock, apparently a lava, from which they are made, does not split as does schist, so that suitable pieces of stone had to be reduced to rough shape by "pecking." The asperities left by the process of "pecking" were then reduced by "bruising." Grinders and polishers were then employed before turning out the finished article.

There is at the present no evidence that either flaking or sawing were ever employed in the manufacture of stone weapons.

CLASSIFICATION OF WEAPONS

The classification of weapons adopted for this paper recognizes six groups and in addition a double-headed club and some of abnormal form. The groups are: I. Weapons symmetrical in outline, distal edge straight, longitudinal edge straight, or slightly curved; II. weapons symmetrical in outline, with concave longitudinal edges; III. weapons symmetrical in outline, with convex longitudinal edges and poll single; IV. weapons symmetrical in outline with convex longitudinal edges and poll ornamented with two knobs; V. weapons of whalebone, symmetrical in outline, blades serrated all round, poll single; and VI. weapons shaped to represent birds.

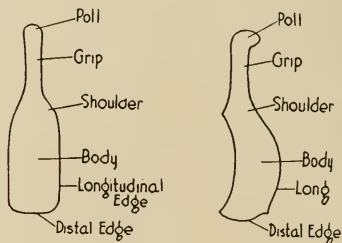


FIGURE 28.—Diagrams illustrating terminology used in the description of weapons.

Group I is composed of *patu* which approximate to the *adz* form. (Pl. XXVII, *e, f, g, h.*) Whether the whole *patu* class has evolved from the *adz*, as advocated by Pitt-Rivers and formerly by the present writer, or whether

its origin must be sought elsewhere, there can be no doubt that the *adz* form has greatly influenced the group as a whole, and that forms exist intermediate between *adz* and *patu*. These intermediate forms are more common in New Zealand than at the Chathams. No attempt can be made to trace the origin of Moriør *patu* without giving full consideration to the Maori evidence, and vice versa. The problem therefore falls beyond the scope of the present work.

New Zealand is the only region in Polynesia which affords closely related material. (See figs. 29-31.) The relationship between Maori and Moriør *patu* is exactly parallel to the relationship between Maori and Moriør crania; as members of a class the Chatham Island weapons show a marked family resemblance, yet New Zealand parallels can be found for almost every individual form. The principal points of difference are the wider range of forms of the Maori weapons, their better finish, due to the better material available, and the almost invariable perforation of the poll.

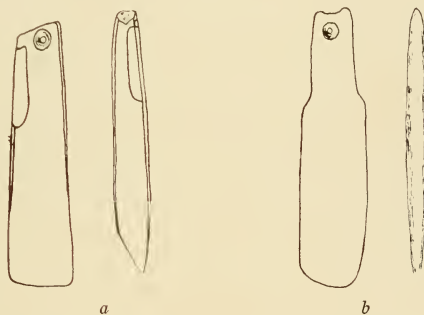


FIGURE 29.—Sketches of weapons from New Zealand: *a*, adz weapon from Whangarei, New Zealand (Fels Collection); *b*, weapon of basalt from Otago (Buddle Collection).

Figure 29, *a* represents a form intermediate between an *adz* and a more specialized weapon. In figure 29, *b*, a further stage has been reached. The cutting-edge is still confined to the distal end, and the lateral sides are straight, but the grip is strongly developed. These two Maori forms afford parallels to those figures in Plate XXVII, *f-h*.

Figure 30, *a*, illustrates the occurrence in Maori weapons of two curved ridges that appear also on Moriør weapons (Pl. XXVII, *g* and *h*, Pl. XXX, *d*). It should be noted that weapons shown in Plate XXVII, *c* and *h*, have distal edge straight but the longitudinal edges curve inwards accommodating themselves to the greater specialization of the grip.

Group II (Pl. XXVIII, *a, b, c*) appears to be a purely local development.

The weapons in Group III (Pl. XXVIII, *d-g*) are closely allied to the *mere pounamu* of New Zealand. (See fig. 30, *b*.)

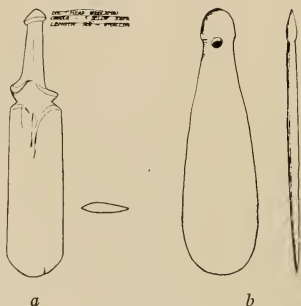


FIGURE 30.—Sketches of weapons from New Zealand: *a*, whalebone weapon from Southland, length $14\frac{3}{4}$ inches (Fels Collection); *b*, *mere pounamu* from Taranaki (Skinner Collection).

The Mori *patu* in Group IV (Pl. XXIX, *a, b, c, d*) may be compared with New Zealand specimens in which the poll is divided into two. (See fig. 31, *a*.) A bone fragment in the White collection from Otago indicates that the two knobs represent birds' heads. Figure 31, *b* shows the birds in full. Unfortunately the locality of this example is not known.

With Group V (Pl. XXIX, *e, f*) may be compared the conventionalized bird's head carved on a wooden Maori *patu* (fig. 31, *c*). The head is usually much more humanized than in this example.

Group VI is represented by Plate XXX *a-d* and XXXI, but in addition to these typical examples three sub-groups may be recognized.

UNCLASSIFIED FORMS

The peculiarities in design of the weapon shown in figure 32, *a*, are obvious. It is the only Mori *patu* so far recorded of which the grip has been perforated and it probably represents a separate group of which no other members have yet been collected. We have no Mori evidence, but on the analogy of related Maori weapons it is safe to conclude that through this hole a cord was passed which was attached to the holder's wrist or thumb. The poll is ornamented with two knobs. There is a median ridge from the grip to the distal edge of the blade. On the face of the blade a loop coil has been etched. The distal edge is notched. (See Pl. XXVII, *h*.) This peculiar treatment of the distal margin finds

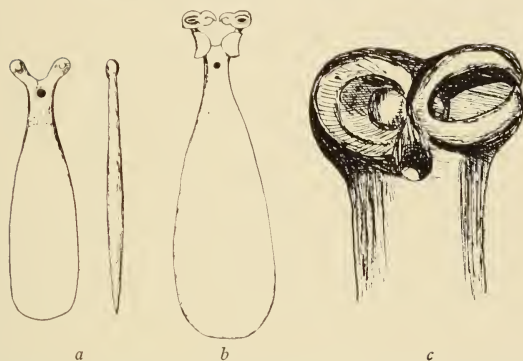


FIGURE 31.—Sketches of weapons from New Zealand: *a*, whalebone *patu* from Otago (John White Collection); *b*, whalebone *patu* (Cambridge University Museum); *c*, poll of wooden *patu* (Skinner Collection).

a close parallel in a group of ancient wooden weapons now coming to light from swamps and caves in New Zealand.

The curved stone artifact shown in Plate XXXI, *f* is possibly an unfinished weapon. Figure 32, *b* from Canterbury, New Zealand, represents a worked stone closely resembling that in Plate XXI, *f*. I found a similar one at Pura-kanui, Otago, New Zealand.

There remains a class of weapon, the double-headed club, about which our information is somewhat contradictory. Broughton mentions "stones fashioned like the Patoe Patoes of the New Zealanders," and these would probably belong

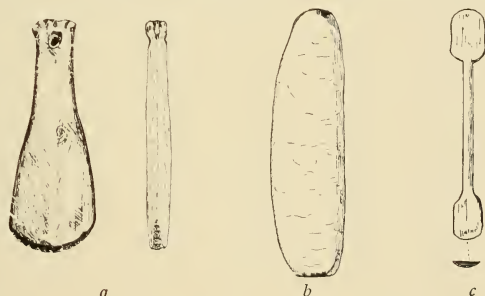


FIGURE 32.—Sketches of miscellaneous weapons: *a*, two views of unclassified Moriori weapon, length 14 inches (Otago University Museum); *b*, sketch of shaped stone (38, p. 208, No. 3) in Canterbury Museum; *c*, double-headed club (27 *a*, p. 39, No. 3).

to one of Groups I, III, or IV. Later he says: "He who had received the stones from the old man had them now fixed, one at each end, to a large stick, about two feet in length." One receives the impression, though it is not definitely stated, that this weapon was used as a club in the subsequent hostilities. Johnston is reported as saying (McNab, 1916, p. 506): "Their clubs were rough pieces of wood, some as picked up from the beach, others as they had been broke from the tree, and a very few had two stones lashed on at one end, which gave them the appearance of a double-headed maul." It seems probable that there is here a misprint and that the passage should read: "lashed one at each end." Only by supposing such a mistake can the reference to a double-headed maul be understood. But, whatever may be the truth about Johnston's report, Broughton's account of a stout stick, two feet in length, with a stone head at each end, is explicit, and there is no reason to doubt it. We have no further information about the weapon, but it probably resembled figure 32, *c* described as a "double-bladed implement of pale heavy wood," from the southeast Pacific.

CLOTHING AND MATS

Mr. Percy Smith informed me that he found in a cave on Chatham Island a fragment of an ancient mat which was more finely plaited than any Maori mat he had ever seen, and called to mind the *sivea* mats of Fiji and Samoa. This fragment, which seems to have been the only specimen of Moriori mat plaiting preserved till recent years, was presented to the Auckland Museum, but has since, unfortunately, been lost.

The early explorers do not give much information about clothing. Broughton (1798, p. 84) says: "Their dress was either a seal or bear-skin tied with sinnet, inside outwards, round their necks, which fell below their hips, or mats neatly made, tied in the same manner, which covered their backs and shoulders. Some were naked, excepting a well woven mat of fine texture, which, being fastened at each end by a string round their waists, made a sort of decent garment." Johnston's account (60, p. 506) is even briefer than Broughton's: "Most of them were covered with mats of seal skins hung loosely over the shoulders, which reached down to about the hip." Johnston adds that they had no covering but a mat, "neatly wrought, like the Marro of the Sandwich Islands." John Biscoe, R. N., commander of the sealing brig "Tula" which visited the islands in 1831 (59, p. 88) says of the three Morioris who came aboard: "They were quite naked, with the exception of a short mat over the shoulders, which seemed to be used as a roof to them to turn the water off, and a strap of the same material passed under the crutch." This description seems to indicate a cape but Broughton

elsewhere describes it as a coat, suggesting the type of garment figured by Tasman²³ at Golden Bay, New Zealand.

Further information is supplied by later investigators. Hunt (10, p. 34) mentions seal-skin cloaks, and proceeds:

The only garment worn by them in early times was made from the leaves of the flax, split into three or four strips, and interwoven into each other like a kind of stuff between netting and cloth, with all the ends, which were eight or nine inches long, hanging down on the outer side. It was suspended from their shoulders like a cloak, tied round the neck, and extended a little below the knee. In addition the females girded their loins with a band of plaited flax.

Shand's account (56, p. 8) is much fuller than any of the others:

As a rule they went half naked, and when engaged fishing on the rocks or elsewhere—not at sea—were quite so. Originally they used mats for clothing, the general name of which was *weruweru*. These were made of scraped flax (*muka*), and were fine in texture, and warm. Later this kind of clothing was abandoned and sealskin was universally adopted, so that the art of making the mats became lost. The skins were used fur inwards. After the arrival of the English sealers in the early years of this (the 19th) century, a ruthless destruction of the seals—young and old—took place, by which they were all killed or driven away, thus depriving the Moriōris of their clothing supply. It is believed that the loss of their warm seal-skin clothing, together with the rough treatment they received from their Maori conquerors, had not a little to do with the rapid decrease of the people which had set in prior to 1835 (the date of the Maori conquest of the group), but which increased with rapid strides subsequent to that date.

When, through the depredations of the sealers, the Moriōris were deprived of seal-skins for clothing, "they attempted to recover the art of mat-making, but at this juncture the Maoris arrived, and taught them their own art."

Shand continues:

A kind of belt called a *tahei*, made of *muka*, was worn, together with the *marowhara* or war girdle, which was put on before going to a fight (so-called), when certain *karakia* (incantations) were repeated. The *marowhara* was made of scraped flax—not scutched like *muka*—and was about five yards in length, worn criss-crossed over the shoulders and round the waist, with the ends ultimately brought through the *tahei* or girdle, to allow of one end hanging in front and the other at the back, and coming down nearly to the knees. These were supposed to be worn by people of rank.

They also made use of a fine kind of net, *kupenga*, as a substitute [for sealskin], manufactured from *muka*; and also plaited a rough kind of mat called *tukou*, from broad strips of flax leaves, which on shrinking formed a very indifferent protection from the cold.

The general name for flax mats was *weruweru*. From the statements quoted we may conclude that the sealskin cloak, reaching below the hips and fastened round the neck by strings of flax fiber, was the principal Moriōri garment. *Kupenga* was the name given to a mat—apparently similar in shape to the sealskin cloak—which was made of closely netted twine, and this twine was made of

²³ Heeres, J. E., Journal of Tasman, plate at August 3, 1642.

scutched flax fiber. It seems probable that this type of cloak was a hasty and useless improvisation to replace the sealskins, and to be without parallel among Maori mats. It may possibly, however, have been allied to the feather cloak of Hawaii, the basis of which is network. From Shand's account it would appear that the name *tukou* was given to the flax cloak described by Hunt, which was similar in shape to the Moriori cloaks of sealskin and to the rain-cloaks (*taratara*) of the Maoris. This also seems to be the type that Broughton saw at Skirmish Bay and that Biscoe described as worn by the three natives of Pitt Island. The belt of scutched flax called *tahei* is probably to be equated with the Hawaiian belt to which the *maro* was tied and with the scutched flax belts of the Maoris of which perhaps the best example in existence is that preserved in the Cambridge University Museum of Archaeology and Ethnology. It is a belt from the Trinity College Cook collection. Broughton, Johnston and Biscoe all mention the small neatly woven mat which passed under the crutch and was attached in front and behind to the belt. King (Journal, after entry of March 12th) thus describes the Hawaiian *maro* [*malo*]: "The dress of the men generally consists of a piece of thick cloth, called the *maro*, about ten or twelve inches broad, which they pass between the legs, and tie round the waist." If Webber's drawing is accurate, it is probable that the Hawaiians wore the *malo* narrower on ceremonial occasions than at other times. Hunt is apparently referring to this type of mat when he says: "The females girded their loins with a band of plaited flax." In this case they may perhaps be equated with the triangular aprons which Hamilton (Maori Art, p. 332) states were called *maro* and were worn by women.

The Moriori *marowhara* must not be confused with the mat which we have just described. There seems to have been something unusual in the method of manufacture of the *marowhara*, as Shand states expressly that the flax was not scutched, but scraped. He also states that it was worn only by people of rank, and was put on only when going on the warpath. It is frequently mentioned in Moriori tradition. When their ancestors fled from Hawaiki in the Rangimata canoe the chant of farewell that came to them across the water ran as follows:

"'Tis Tu, 'tis Rongo the outspread *maro*,
 Tane and Tangaroa,
 As also the sacred ends,
 The *maro* of the Lord, the *maro* of Waiorangi.
 Seize the crown of Maka!
 Fight to the east, fight to the west, fight to the distant east!
 Rise! Stand up!
 Gird it, that it may encircle!
 Whose is the *maro* which is outspread?
 Uru, Ngangana, Aiorangi,
 Tahu, Moko, Maroro and Wakehau is the outspread *maro*.

As also the sacred ends,
The *maro* of the Lord, the *maro* of Waiorangi.
Seize the crown of Maka!
Fight to the east, fight to the west, fight to the distant east!
Rise! Stand up!
Gird it that it may encircle!
Whose is the *maro* which is outspread?

In this chant, the *marowhara*, with its ends that waved before and behind the warrior, is associated with some of the names that were most sacred to the Moriōris:²⁴

Another kind of garment mentioned in the traditions is the *kakaponga* (56, p. 99). It was used as a defence against spears, and its name is a metaphor based on the trunk of the tree-fern. *Pokipoki* is the name of a coarse kind of mat.

METHOD OF MAKING MATS

When the fiber of the flax (*Phormium tenax*) had been scutched it was called *muka*, a name used also by the Maoris. The Moriōris had no loom, and their mat-making must therefore have been the plait method used by Maoris, Hawaiians and Indians of the Northwest Coast. I was told by several settlers that one of the steps in preparing flax fiber was to beat it, as the Maoris did, with a stone beater on a smooth stone. Many of the *patu*, usually described as weapons, are said to have been used for this purpose, and near Tennant Lake Mr. R. McClurg pointed out some waterworn basalt boulders, evidently carried from Ouirā, which he informed me were the tables on which the fiber was beaten.

Travers (20, p. 21) describes the Moriōri methods of dyeing the prepared flax in three colors, red, brown and black. But as the methods are identical with those employed by the Maoris, and as it is expressly stated by Shand that flax-working was re-learned from the Maoris after the disorganization brought about by sealing and conquest, it is not safe without further evidence to accept Travers' account as accurate for pre-Maori times.

In the preparation of flax and of fern-root pounders or beaters were used. No distinction in shape corresponding with the difference of function has been recorded. Many of the objects classified as *patu* are said to have been used as beaters. Of the implements shown in Plate XXXII, one (*b*) has been described as a drill by Percy Smith. It is not certain that *c* and *d* are of Moriōri workmanship and *c* and *f* which suggest Taranaki types are perhaps of Maori origin.

²⁴The comparison with the *malo-saru*, the sacred belt or body-garment of Melanesia is tempting, and there can be little doubt of their connection. It is tempting also to compare the suffix *whara* with Melanesian *worawora*, a sacred belt, and to remember that Rivers (in his *Melanesian Society*, vol. 2, p. 424, 1914) has already associated *malo-saru* and *worawora* in a Melanesian culture complex with the cult of the sun, and burial in an upright position. Both are connected with the Sukwe: vol. 1, pp. 82 and 130, etc., 1914.

BOXES AND RECEPTACLES

Several varieties of receptacle were used by the Morioris. The *puwai*, a conical vessel made of plaited flax and used to carry water, is often mentioned in their stories. Wooden vessels called *hakana* were also used to hold water. Trinket boxes called *putea* figure in several traditions, but whether they were of wood, as among the Maoris, or of plaited flax is not specified.

There is nowhere any mention of the pumice receptacles which were commonly used among the Maoris. At Ouirā I found a large rectangular one, in circumstances which convinced me of its Moriori origin.

MORIORI SEA-GOING CRAFT

Of Moriori vessels in general, Shand (56, p. 10) makes the following remarks:

In the matter of canoes, the Morioris differed essentially from all other branches of the race; in fact, they possessed none, properly so-called, but used a kind of built-up craft, very clumsy, especially for pulling, but otherwise very safe, so long as the fastenings were sound. Heavy weather they were not liable to fill and capsize like a Maori canoe, being really, from their construction, more rafts than canoes. Their sea-going ancestors from far Hawaiki would have scorned the use of such a vessel, and certainly could not have undertaken a distant voyage in one—the material of which they were composed would not have held out. On the other hand, considerable ingenuity was shown in utilizing such unpromising material as they were possessed of. The absence of canoes arose from the fact that the islands possess no timber of a sufficient size and quality to make canoes from. The flooring of their rafts was made of *korari*—the flower-stalks of *phormium tenax*—with kelp placed in the crate-like frame beneath, to render the vessel buoyant. The kelp was of the large broad-leaved kind, and was inflated with air; it was taken out on landing, dried, and re-inflated as before. Notwithstanding the flimsy character of these vessels, the people were accustomed to cross from Chatham Island to Pitt Island, a rough sea strait of twelve miles in width, and to undertake far more dangerous voyages to the small off-lying islands, some of which are 15 to 20 miles away from the main island, although closer to Pitt Island. It very often happened however, that these raft-canoes and their crews were caught in a storm and were carried out to sea, there to perish. They were large enough to carry 60 to 70 people, and were propelled by paddles (*hika*), which, contrary to the method of all other Polynesians, were used by the crews sitting with their backs to the bows, as with Europeans, and by making use of a support, or thole-pin, against which the paddle worked. They carried fire with them for warmth, which was placed on stones and earth on the floor of the raft-canoes.²⁵ Their raft-canoes never had sails; the larger and sea-going ones were called *waka pahii*, or *pepe*.

The difficulties of navigation with such vessels were numerous.

²⁵ In a manuscript in the Dominion Museum Shand states that the earth was placed in a specially plaited basket.

The procuring of the young *hopo* (Maori, *toroa*) [a sea bird] was a work of great danger and difficulty, with the peculiar style of raft-canoe they used, great skill being required to manage them on account of their deep hold in the water, which also made propulsion very heavy, although they were far less liable to capsize than a Maori canoe. In judging of the proper state of tide and current to avoid being carried away to sea, when crossing over to the outlying reefs and islands, great judgment was required. By taking advantage of the proper state of the wind and tide, they were enabled to make voyages which the appearance of the canoes would seem to forbid. "The nights of the moon" ("the moon's age") was their chief guide in all these expeditions. Beginning with the first night of the moon, when she appears as a thin slender crescent (*Otere*, 1st night, *Tirea* in Maori), from this onwards to *Omutu* or *Owehiro*—nothingness; each night conveying to them a certain idea in relation to the tides, especially *ka tai tamate(a)*—spring tides—when it was very dangerous to venture forth to sea.

The fullest account of the different types of Moriør vessels is Shand's (18, p. 354), but even in this he has sacrificed clearness to brevity. The general name for a vessel was, as with the Maoris, *waka*. There were four principal kinds of which three were of the same constructional type, varying only in materials and size, but the fourth was used for religious purposes and was made on a different plan. The information preserved by various writers is given below, divided, as far as possible, according to Shand's classification.

WAKA-PUHARA, OR WAKA-KORARI

Of this type are the vessel in the Canterbury Museum and one of the pair in the Dominion Museum. Within a frame-work made of *matipou* or of *ake-ake* wood were enclosed masses of *korari* (stalks of the flower of *Phormium tenax*) which supplied the required buoyancy.

Plate XXXIII, *a*, represents the Canterbury Museum specimen. For the following description of it I am indebted to my father, Mr. W. H. Skinner.

This canoe is of comparatively modern construction, but built upon the lines of the original canoes of the Moriør.

The first step in construction was the making of the framework, the basis of which was apparently the double keel or pair of runners. These runners, which are 10 inches apart and 2½ inches deep by ¾ inches wide, keep the framework along the bottom clear of sand and pebbles when beaching the canoe. This was necessary as this framework was made up of flimsy material which could not stand the action of beaching, as the smoothest landing would soon break its frail frame. The bottom frame is laid horizontally between and above the two keels and is made up of 10 inch lengths of supple-jack and *matipo*, laid two inches apart at right angles to the length of the canoe. On this rests the floor of the canoe which is made up of closely packed flower stems (*korari*) of the flax plant (*Phormium tenax*). This packing is six inches in thickness and constitutes the floor of the canoe. All this packing is tightly lashed together and to the bottom framework, in narrow sections, by strong flax bindings. The framework for the sides is set vertically, at right angles from the bottom frame of the canoe, and is made up of the same small but tough and pliable material, supple-jack and *matipo* and small stems of *ake-ake*. These are twelve inches in length, are laid two inches apart, and run from the stern to within eighteen inches of the extreme end of the square bow. Upon the outside of

this frame are lashed the side boards or padding, constituted of flax sticks (*korari*) and fern stalks, (*aruhe* or *pteris aquilina*) the whole surmounted by a tough pole of *matipo* which runs from end to end of the canoe along its top edge. Immediately below the pole and between it and the seats on the inside of the structure, a roll of fern stalks, tightly bound together lengthways by lashings two inches apart, is laid in lengths end to end along the canoe. These would give buoyancy if the canoe were deeply laden and would also give pliancy to the sides if subject to strain. A further lateral strengthening of structure is gained by fixing a rough pole along each side of the canoe a few inches out from the vertical frame and running from the back seat to the front seat underneath these, as shown in the illustration. The width between these two rods is ten inches. Between them the legs of the occupants were confined when seated.

The seats, five in number, were made up of short pieces seven inches in length, of fern stalks, laid closely and lashed side by side, supported on four cross pieces of tough twig and supple-jack, and at the back edge, in each case, by a cross piece of *ake-ake* (*Olcaria traversi*), which would take the main weight of rower or paddler. These *ake-ake* slabs were 16 inches long by 5 in depth, and, with the rather heavy slab of the same wood at the stern, make up the only solid timber about the structure. The stern piece which gives stability to that part of the canoe, and would act as a substantial buffer in running before a sea, is a solid slab of that most durable tree-shrub the *ake-ake* which grows so luxuriantly at the Chathams. The slab is 19¼ inches over all in length by 6 inches in depth and was rudely ornamented by two rough carvings of birds in conventional style. The photograph discloses five short rods cut from saplings which were lashed to the lower lateral strengthen bar or sapling and projected 2 or 3 inches out over the upper rod or rim of canoe, the foot in each case being firmly embedded in the flooring material. These I take to be the thole pins or rough rowlock sticks against which the oars worked.

The only ornamentation, apart from the conventional birds carved on the stern board, were clumps of white sea-birds' feathers attached to the upper edge of the canoe from abreast of the front seat onwards and carried out along the two projecting prow sticks, whose ends were carved to represent the heads of sea-birds.

The length of the canoe over all is 13 feet 3 inches. Length of main keel runners (straight bottom of canoe), 7 feet 6 inches; ditto of continuation of runners curving upwards to end of square prow, 4 feet. The extreme depth from the top of base rod to bottom of keel runners, 17½ inches.

The structure, designated by courtesy a canoe, was in reality a glorified *mohiki* or raft, able to be propelled and steered by oar or paddles. It was not in the slightest way water tight, and when fully laden must have been water-logged to the seats. All the packing material was of the lightest and much of it, such as the flax sticks, almost as buoyant as cork.

MEASUREMENTS OF CANOE

Length over all from stern board to square end of bow, 13 feet 3 inches.

Width over all at stern, 19¼ inches.

Width inside from roll to roll of fern stalks, 14½ inches.

Seats, 14 by 7 inches.

Width of canoe at prow—outside, 17 inches.

Depth of canoe over all, top of barge—rod to bottom of runners, 17½ inches.

Depth of canoe over all, top of barge to floor, $7\frac{1}{2}$ inches.

Depth of canoe over all, from seat to floor, $5\frac{1}{2}$ inches.

Distances between seats from No. 1 at stern to No. 2, 17 inches.

Distances between seats from No. 2 at stern to No. 3, 19 inches.

Distances between seats from No. 3 at stern to No. 4, $18\frac{1}{2}$ inches.

Distances between seats from No. 4 at stern to No. 5, 18 inches.

Distances between seats from No. 5 to extreme end of bow, 2 feet 8 inches.

Length of keel runners which are laid in parallel lines 10 inches apart, 7 feet 6 inches.

Length of keel continuation of the runners but curving upwards, 3 feet 11 inches.

Main runners or keels, $2\frac{1}{4}$ inches deep by $\frac{3}{4}$ inches wide.

Slabs of Akeake to support seats and stiffen canoe, 16 inches long by $5\frac{1}{2}$ inches deep.

Oars or paddles: No. 1, 4 feet 2 inches long; width of blade at end, 6 inches.

Oars or paddles: No. 2, 5 feet 7 inches long; width of blade at end, 5 inches.

The *waka-korari* in the Dominion Museum is shown in Plate XXXII, *b*.

WAKA-RIMA

This type was similar to the previous one, except that buoyancy was supplied by *rimurapa* (bull kelp). Shand states that the usual measurements of such canoes were: Length from 30 to 35 feet; depth, 4 to 5 feet; width, 4 to 5 feet. It seems probable, however, that Shand's Moriori informants much overstated their size, for all the accounts that we have indicate a craft of about the same size as the Dominion Museum examples, which are about 8 feet and 10 feet in length respectively. Broughton (2, p. 86) describes them thus:

The canoes we examined were more in the form of a small hand-barrow without legs, than any other thing to which they can be compared, decreasing in width from the after to the fore part. They were made of a light substance resembling bamboo, though not hollow, [korari or flax-stalks] placed fore and aft on each side, and secured together by pieces of the same wood, up and down, very neatly fastened with fibers of some plant in the manner of basket work. Their bottoms, flat and constructed in the same way, were two feet deep, and eighteen inches in breadth; the openings of the seams on the inside and bottom were stuffed with long seaweed; their sides meet not abaft nor forward, their extreme breadth aft is three, and forward, two feet; length eight and nine feet. In the stern is a seat very neatly made of the same material, which is movable. They appear calculated alone for fishing amongst the rocks near the shore; were capable of carrying two or three persons, and were so light that two persons could convey them anywhere with ease; and one could haul them into safety on the beach. Their grapnels were stones, and the ropes to which these were made fast were formed of matting worked up in a similar way with that which is called French sinnet. The paddles were of hard wood, the blades very broad, and gradually increasing from the handle.

Johnston's description (McNab, 60, p. 503) is briefer:

"We found two canoes. . . . In shape they were not unlike the body of a common wheelbarrow, their sides were made of small sticks lashed tightly with . . . upon one another about 8 or 9 feet long. The widest end about 3 feet, the other about 2, and narrowing downwards, left a flat bottom better than a foot broad. Their depth was nearly 2 feet, and com-

pactly filled with seaweed almost to the top. The paddles were a rough piece of wood rudely made into a flat form, without the least neatness. The whole of their construction made it pretty evident that they could never be employed on any distant embarkation, but were most probably used mainly in the bays and amongst the rocks for fishing."

The evidence of Travers (11, p. 354) is brief, but contains some information that is of interest:

They had no canoes, there being no timber on the islands sufficiently large to construct them; but they formed rafts of the flower-stalks of the *Phormium tenax*, lashed together with supple-jack, and having an upright stem ingeniously carved. The paddles were shaped like a spade, and were used at the stern of the rafts, very much in the same manner as a spade would be used in digging.

Welch (14, p. 99) says:

They have no idea of boats except their own wretched crafts, composed of the flower-stalks of *Phormium tenax* made basket-like, and tied together with strips of the leaf and young *karraeo*, or supple-jack vines. These frail rafts were filled in the lower part with kelp, or bladder-wrack, and other floating sea-weeds, which gave them sufficient buoyancy to enable them to be taken a little way out to sea and on the lakes to fish; and some of the fishermen would often sit in one of these frail barks up to his knees in rotten sea-weed, as they never took out the first lot put in, but continued to heap in fresh quantities in order to keep up the floating powers of this primitive ship. Probably the want of timber suitable for the purpose prevented their making canoes of a more substantial nature, as they possessed stone axes like the New Zealanders. The operation of felling a tree was, however, a considerable undertaking, involving, according to their accounts, a month's labour; and probably this prevented their making wood rafts, which would have been infinitely more safe, and as easily propelled with the same means as they propelled their flax rafts—namely, with a paddle of wood, shaped like a spade, and used at the stern.

Davis states (15, p. 103) on the authority of Welch, that these Moriori craft were irregular in shape, some of them almost square, others rounded, two feet deep, and always buoyant. If this statement is correct, which may be doubted, Welch may be referring either to the degenerate craft produced a generation after the break up of Moriori society, or to some raft like the Maori *mokihi*, a secular version of the *waka-ra*.

WAKA-PAHIHI AND WAKA-RA

The structure of the *waka-pahii* seems to have been similar to that of the canoes already described, its only difference being its much greater size. Its length is put by Shand at 50 feet, its breadth at 8 feet, and its depth at 5 feet. *Pahi* is the Maori word which denotes a sea-going canoe.

Waka-ra is described by Shand (18, p. 354) as follows:

The canoe was like the New Zealand *mokihi* (raft made of *raupo* leaves tied in bundles), but made of *korari* (flax) and *rahauhe* (fern) stalks. It was quite low, and had wooden images of men placed on it, from twelve to twenty-four in number, each with a paddle tied to

its hands. With a fair wind the canoe was started off to sea as a messenger to the god Rongotakuiti, who, in response, sent ashore shoals of seals and black-fish. It was called *waka-ra*.²⁶

An unclassified type of vessel not mentioned by any writer is represented by a model in the Canterbury Museum. (See Plate XXXIV, *a*.) Seen from the side it curves upwards at the bow. It perhaps represents a composite canoe like the *mogihi* of Canterbury and Otago.

OARS OR PADDLES

Two methods of rowing have been mentioned; the commoner method, in which the rower faced the stern and braced the oar against a thole-pin, and the method of sculling from the stern, in which the scull was used with an action resembling that of digging with a spade.

Figure 33, *a* represents an oar (*hiwa*) made at the same time as the model vessel (Pl. XXXIII, *a*) in the Canterbury Museum of which the measurements



FIGURE 33.—Sketches of oars and paddles: *a*, oar (*hiwa*) of *Wakakorari* (see pl. XXXIII, *a*), length 5 feet, 7 inches (1,702 mm.); *b*, oar (*hiwa*) in Canterbury Museum (38, pl. 222); *c*, steering paddle (?) (after Edge-Partington).

have been given. It belongs to the type described by Broughton: "The paddles were of hardwood, the blades very broad, and gradually increasing from the handle."

Figure 33, *b* represents an implement described as a paddle. It resembles the spade used by the Maoris in excavating canals in swampy country.

²⁶For a discussion of the religious significance of *waka-ra*, see p. 62.

Of the spade-shaped scull described by Travers (11, p. 354) I am not able to figure an example, but its shape is probably fairly accurately represented by figure 33, *c*—"from the south-eastern Pacific." Mr. R. McClurg told me that two or three men would stand in the stern of a large *waka* and would all plunge their sculls in vertically at once, and then, levering them against the woodwork of the stern, would drive the vessel forward. This is evidently the action referred to by Travers.

Steering is not described in detail by any observer, but Shand (MS. in Dominion Museum) has the following: "At the stern two or three steersmen, according to the size of the canoe, sat directing the others: '*To tu*,' '*to waho*,' '*here ka raro*,' this more especially in landing on surf beaches."

ORNAMENTATION OF WAKA

In the ornamentation at bow and stern of canoes throughout the Pacific there seem to be two principal elements—the human figure, and the figure of a bird or birds. (See Plate XXXIV, *b*, *c*, and figs. 35, *a*, *b*.) The former of these elements is not represented in the fragmentary material from Chatham Island. Travers says that the *waka rima* had an upright stem (stern piece ?) "ingeniously carved." Deighton (Dominion Museum MS.) says: "These canoes were furnished with a projecting stern post extending some distance above the canoe. This was termed the *koua*. The two pieces of timber projecting from this were carved. The stem (*purema*) was also carved." There seems to be some confusion in this statement. No examples of the tall carved stern-piece have been preserved. Figure 35, *a* is a drawing of the carving on the *koua* or stern-board (See Pl. XXXIII, *a*). The motif seems to be the same as in the ornamentation of the bow. Figure 35, *b* represents the bird's head on the port bow of the same *waka* in the Canterbury Museum. The strongly curved beak indicates a bird of different species from that of XXXIV, *b* and *c*, and recalls the frigate bird of the western Pacific.

In tradition (56, p. 127) the projecting parts of a canoe are said to have been decorated with scarlet feathers.

MORIOTI WORDS RELATING TO CANOES

HIWA, oar. Cf. Maori, *hiwa*, an old name for a paddle.²⁷

HUA, the keel.

KOUA, carved board across the stern. Shand's definition of *kou* as stem (56, p. 118, note 22) is probably a misprint. Cf. Maori, *koue* to steer with a paddle or oar.²⁸

PORA, ship (see 56, p. 218). Cf. Maori *pora*. "A ship. Canoe with a platform."²⁹

²⁷ Hamilton, A., Maori art, p. 17, 1896-1901.

²⁸ Op. cit., p. 19.

²⁹ Op. cit., p. 20.

PUREMU, the two carved pieces of wood projecting from the stem. Cf. Maori, *puhi*, 2 rods projecting from bow.

WAKA, a generic name for a native vessel. Cf. Maori, *waka*, with the same meaning.

WAKA-KORARI, defined above.

WAKA-PAHII, defined above.

WAKA-PUHARA, defined above.

WAKA-RA, defined above.

WAKA-PEPE, vessel made of poles. Cf. Maori, *paepae*, beam.

WHAKAPIRI, the consort, the second canoe of a double canoe (56, p. 104).

For *pahii*, cf. Maori *pahi*, a sea-going canoe. For *ra*, cf. either Maori *ra*, a sail or Maori *ra*, the sun, as seen also in "Tama-te-ra," the Moriōri god already mentioned.

Macmillan Brown (61) used *waka-patu* as the general term for Moriōri vessels, but does not state his authority.

ORIGIN AND RELATIONSHIPS OF WAKA

On the question of the origin of this type of craft Macmillan Brown writes as follows:³⁰

The Moriōri have many things that differentiate them from the Maoris. They have wash-through canoes (*waka-patu*) for fishing; they sit with face to stern as in rowing; they have in their phonology the consonant *ch*, which appears in no other Polynesian dialect except Tongan. I have always thought they came from a group different from the Maoris. Their *waka-patu* remind me of the *balsas* or buoyant rafts of the Peruvian coast. On Lake Titicaca, I saw canoes made of reeds of much the same type (i. e. wash-through) as the Moriōri, and their attitude in propelling stands alone in Oceania, except in New Caledonia, where they had double canoe rafts with holes in the decking through which they punted their craft.

In this passage a series of points have been raised in favor of the suggestion that the Maoris and the Moriōris came originally from different groups, and as they center round the Moriōri *waka* it will be convenient to deal with them here. Before doing so it may be pointed out that Dr. Macmillan Brown's letter is concerned mainly with the two knobs on the poll of the Nassau Island adz. He records the presence on Moriōri adzes of similar knobs, but does not mention the fact that they occur also in New Zealand. (See fig. 20, d.)

The form of "*waka-patu*" used in the passage quoted above I have not been able to trace. It is perhaps a printer's error for *waka-pahii*, the form used by Shand. The statement that Moriōri *ch* appears in no other Polynesian dialect except Tongan must be modified in view of Archdeacon Williams's statement: "It is the same phenomenon, I take it, as that which used to be noticed with 'h' in Ngapuhi (Northern Maori) and is still sometimes heard."

³⁰ Australian Mus. Rec., vol. 11, p. 202, 1916-17.

A glance at the Moriori nautical terms that have been preserved reveals their close relationship to the nautical terms of the Maoris, especially to some of those that are archaic. The difference in type of vessel is obviously due to the absence at the Chatham Islands of any timber from which a dug-out canoe could be made, an absence which forced the Morioris to turn their whole attention to types which existed in New Zealand but played an unobtrusive part there. Thus the Maori *mokihi* was represented by the Moriori *waka ra*, while the Moriori *waka korari* seems to have been of composite origin. In part it appears to have been derived from a type of Maori vessel of which the name has not been preserved. Hamilton³¹ refers to it as follows:

Mr. Colenso, at page 45 of his *Fifty Years Ago in New Zealand*, mentions small rafts which he saw "hailed up above high-water mark each being eight or ten feet long, and three or four wide, composed of only a few small poles, roughly and distantly, but very firmly, lashed together, with open spaces between them. On these, East-Coast Maoris went out to fish in deep water, one on each, and when opportunity offered, to a ship, with a pig or two fastened to the raft. They said these rafts were quite safe—more so indeed, than a small or middle-sized canoe, as there was no danger of upsetting." I myself saw these in use in the same district last year.

Another element in the ancestry of the Moriori *waka korari* seems to have been a Maori composite canoe. Polack records in the north of New Zealand large canoes made of bundles of the *raupo* leaves, but resembling the ordinary dug-out in shape. The South Island form of this composite canoe is shown by models in the Otago University Museum to have resembled Moriori *waka* in having a square stern. The *waka korari* may owe its shape and composite character to such an ancestor as this, while its framework of rods may have been suggested by the raft of poles described by Colenso.

There is no record of the use of kelp to give buoyancy to any Maori craft, but it is possible that the kelp floats which were found in the cave at Okain's Bay, Banks Peninsula, had such a use. The accepted explanation is that they were floats for fishing nets, but it seems at least as likely that they were used as here suggested.

Macmillan Brown's statement that the Moriori attitude in propelling—seated, with face to stern as in rowing—can be paralleled in Oceania only in New Caledonia, ignores the fact that such an attitude has been recorded among the Maoris on the West Coast of the South Island of New Zealand.³²

No scull like the Moriori type resembling a spade has been recorded from New Zealand, but the type occurs in several parts of Polynesia, including Easter Island, and it is probably fairly represented by figure 33, c.

³¹ Op. cit., p. 10.

³² Polynesian Soc. Jour., vol. 21, p. 145.

From these facts it is evident that we need not go so far afield as South America for comparative forms. Moriŕi *waka* are not isolated phenomena but as regards structure, paddles, and nomenclature they are closely related to the *waka* of the Maoris.

MUSICAL INSTRUMENTS

Shand (56, p. 11) states that the Moriŕis had no musical instrument but that "they knew traditionally of the *koauau*, or flute of the Maoris, the use of which, however, was neglected."

Plate XIII, *a* shows a bone flute decorated with rectilinear design. The Maori method of playing this type of instrument was as follows: One end of the flute was pressed against the upper lip below the right nostril, the instrument projecting horizontally away from the lip. The left nostril of the player was blocked by the left thumb. The player then blew downwards through the right nostril into the hole below, the three stops being manipulated by the fingers of the right hand. In this Moriŕi flute there is a hole in the middle of the flute in the same line as the three stops but not spaced evenly with them. Presumably this hole has been added because the spacing of the first three did not produce the required notes. If this is the correct explanation of the fourth stop, we may suppose that one of the first three was plugged when the fourth was in use. The material is albatross wing-bone.

Plate XIII, *b* apparently represents an unfinished flute. It has been carefully cut, and one end has been ground into shape. The hole in the middle and the fact that the ends have been cut at right angles to the long axis both indicate that it was not intended to be shaped into a needle or a picker. The hole or stop is cut, not drilled. The material is the wing-bone of some large bird.

USE OF BONE AND GREENSTONE

From the objects in bone that have been figured it is clear that the Moriŕis were relatively much less skilful in working bone than in working stone. Some examples indicate a fairly skilful use of the sandstone saw, and one or two of the perforations are evidence of mastery over the drill. But the general use of the drill for all sorts of purposes, which is a notable feature of bone technique in Otago, is altogether beyond the power of the Moriŕi workman. Many of the pendants, especially the larger ones in whale ivory, show a lamentable lack of ability to adapt design to material. Some few, however, indicate good workmanship, and a sense of form.

Plate XIII, *c*, represents the type of cutter which ran in a groove and was hafted. This type was probably used in the working of bone. Plate XIII, *d*,

represents a sandstone cutter or polisher, designed to be held in the hand and used on such work as the serrations of the whalebone *okewa*, or the polishing of the larger fishhooks.

I am unable to figure drills, or drill-points, as none of these are represented in collections.

Articles made of greenstone (nephrite) are occasionally found at the Chatham Islands, but as the stone does not occur in the group the presumption is always that they have been brought there by the Maoris. If a pre-Maori date can be proved for any greenstone object this will amount to definite proof of communication between the Chatham Islands and New Zealand in pre-Maori times. Unfortunately the pre-Maori date of any piece of nephrite cannot be conclusively demonstrated. There is, however, sufficient evidence to warrant the conclusion that the three pieces figured in Plate VIII, *d*, *k* and Plate XIV, *a*, came to the islands in ancient times. Of these, Plate XIV, *c*, illustrates the methods of working nephrite usual in New Zealand, Pl. VIII, *d* is the commonest type of pendant in that material, while Pl. VIII, *k* appears to be a *toki pou tangata*, or fighting adz. It seems probable that it is the historic Toki a Rei Meitei, the greenstone weapon brought to Chatham Island in the Oropuke canoe by Moe.

PERSONAL DECORATION

Broughton (2, p. 91) says: "Their hair both of the head and beard, was black, and by some was worn long. The young men had it tied up in a knot on the crown of their heads, intermixed with black and white feathers. Some had their beards plucked out. Their skins were destitute of any marks." Johnston (60, p. 506) mentions their straight black hair, "which some wore tied in a bunch on the top of their head, whilst others suffered it to hang down loose in its natural order about long enough just to reach the shoulders. We saw no perforation either in their ears, nose, or any other part of the body." Shand (56, p. 2) states that both men and women wore the hair long, reaching to the neck as the Maoris sometimes did. "The men wore a top-knot (*hou*), in which the hair was gathered together in a bunch on top of the head and bound with a string. This top-knot was adorned with an *awanga*, an ornament in the shape of a small kite. This was formed of a ground work of prepared flax (*muka*), on which were neatly bound in rows the light red-colored feathers of the parrot (kakariki) and which, tapering off to a tail, was bound on to the *hou* in front above the forehead. The *awanga* was also called a *kura*. Plumes, called *piki-toroa* (made of albatross feathers), were also worn on the head, struck in front of the *hou*." The ornament worn by Taylor (Pl. I, *a*) appears to be an *awanga*.

The red feather ornaments called *rauira* (Shand, 56, p. 140) or *awanga* which, when not worn, were kept in a small wooden box or in a specially woven basket called *pute-a-kura*, are frequently mentioned in the traditions. Thus, when Koti stole the *pute-a-kura* of Kakuna-te-ao he was pursued but escaped. "He undid the treasure-basket and distributed it over his people. There were eighty *kuras* and eighty people; the circlet was placed on Koti, and the projecting portions of the canoe were adorned; the scarlet color was diffused around." (Shand 56, p. 126.)

"The Moriors," says Shand (56, p. 2), "as far as can be ascertained, did not bore the ear, or wear any ear-ornaments. Strange to say, they did not tatoo the skin in any manner, which is remarkable, seeing that all other branches of the race used this ornament in some form or other."

Moriors neck and mat pendants exhibited considerable variety of form. Broughton says (2, p. 91): "A few had a sort of necklace made of mother-of-pearl shells." It is such a necklace as this that is referred to in the myth: "When he jumped over the summit of Hikurangi, the rattling of the *parua* shells Whakatau wore as a necklace was no longer heard." (56, 1911, p. 69). It is evident from this reference that the small *parua* shells were strung on a cord whole, and that they rattled as the wearer moved. Johnston (McNab, 60, p. 506) saw no ornaments "except some few who had a small piece of bone hung round their neck

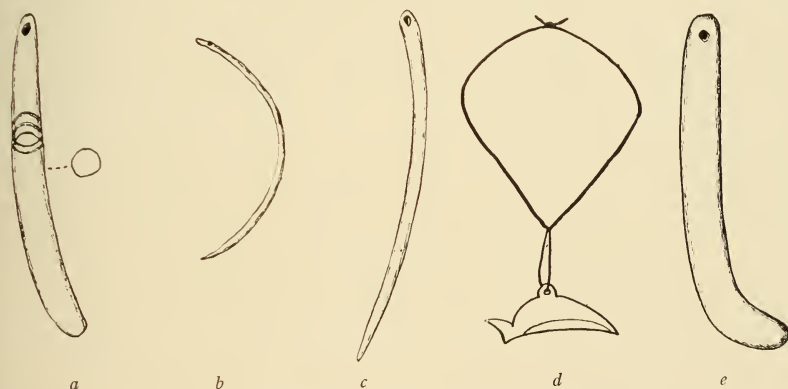


FIGURE 34.—Pendants: *a-c*, bone pendants, Taranaki, New Zealand (Skinner Collection); *d*, pendant in form of a bird, Friendly Islands [Tonga], (After Labillardière—Atlas du Voyage, pl. 32, No. 19, 1798); *e*, pendant of nephrite from Otago, New Zealand (Otago University Museum).

with several parts of small twisted hair." Shand says (56, p. 2): "The flat part of the scallop shell (*pure*) was bored and worn pendant from the neck, with sometimes also a choice piece of flint used as a knife. This latter was notched to form a handle and was suspended from the neck, with a *muka* string tied to the handle. Shark's teeth, and sometimes a piece of *tuhua*, or obsidian, were worn in the same manner. Their principal neck pendant, however, was a sperm whale's tooth, reduced by grinding and with a hole bored through it, called by the Morioris *rei* (Maori *aurei*, Hawaiian *lei*)." According to Shand these teeth, obtained in olden times when sperm whales were numerous and often stranded upon the shore, were divided out among the owners of the land and their relatives. Necklaces formed of part of the skin of the albatross, with the downy feathers attached, were also worn. In such a necklace, which was called a *lei*, were placed scented herbs.

The type of ornament exemplified by the first two pendants figured (fig. 8, *a*, and *b*, p. 69) is not mentioned by any of the authorities. It is a type which is found in New Zealand also, and is especially well represented in the Otago district, where it finds a counterpart in the headless human figures of the cave-drawings. Its significance as a pendant is unknown.

The only observer to mention mat-pins is Williams (39, p. 343), who says that pendants and other ornaments, called *rei*, used for fastening the flax mats when worn as garments, were also manufactured of bone and that the privilege of wearing such ornaments was confined to chiefs.

The different types of Moriori pendants that have been preserved in collections are figured in Plate VII and Plate VIII.

MORIORI DECORATIVE ART

An examination of the plates illustrating this memoir will show that while in stone and bone work the standard attained by the Morioris compares well with that of other island groups in the Pacific, in decorative art they fall far behind. Probably the principal reason for this, apart from the general numbing effect of geographical isolation, was the absence of large timber and of stone that could be treated on a large scale. The absence of large timber made impossible the sea-going canoe with its carved work and its paddles, thus inhibiting art in a field which elsewhere in the Pacific, gave free play to bold design and skilful execution. It also made impossible the carvings of the *whare-puni*, on which the Maori artist lavished his splendid powers of execution and design. Debarred in this way from the free exercise of his larger powers, the Moriori craftsman's skill in small wood-work must have languished and in the end entirely atrophied. For in the Chatham Islands there was no volcanic stone easy to work, as there was at Easter Island,

where it formed a substitute for the large timbers of other parts of the Pacific. Such Moriiori decorative work as still exists is cramped and insignificant, and its sole interest lies in the fact that it has preserved in a primitive form some motives which in Maori art have become conventionalized beyond recognition. Thus the bird's head with its strongly recurved beak, which, as has already been pointed out, is almost certainly a descendant of the frigate bird on the canoe-heads of northern Melanesia, provides the key for deciphering one extremely intricate type of Maori canoe-head, and many other specimens from the Chathams provide invaluable comparative data.

The motives of Moriiori decorative art may be treated under five heads: representation of birds, notching, the human form, rectilinear designs, and coils or spirals.

As the manner of representing birds among any people in the Pacific is a matter of considerable interest it may be desirable to recapitulate the references to the subject scattered through this book. Moriiori representation of birds fall into six groups:

(1) The birds carved on the limestone at Moreoa; (2) The birds carved on house-fronts; (3) The birds carved on canoes; (4) Bird-pendants; (5) Bird-shaped weapons; (6) Birds connected with burial.

As has been seen (p. 74), the birds at Moreoa do not seem to have had any special religious significance. I think that they represent duck and that they are of the same kind as appear on the house-carvings, where all are shown with flat bills.

It is interesting to note the decorative use of bird forms in wood carvings. (Pl. VI.) The ducks seem always to be arranged in pairs, sometimes facing each other, sometimes turned away, and sometimes breast to breast. In the central house-slab, two pairs facing outwards are so arranged that the two inner birds face each other. The conception of these two pairs is realistic, and some animation has been imparted to them. In the carvings where the ducks are placed breast to breast the conception is conventional, exhibiting as little animation as a multiplication sign. The use of notch or of line in the ornamentation of the ducks appears to be quite arbitrary.

The birds carved on canoes seem to fall into three classes: (1) the flat-billed species (Pl. XXXIV, *b*), which appear identical with those just discussed; (2) the sharp-billed species (Pl. XXXIV, *c*); (3) the hook-billed species (fig. 35, *b*).

There is at present only one example of bird-pendant available for discussion. (See Pl. VIII, *c*.) Its beak is curved. The same type of bird pendant occurred in the Tongan islands. (See fig. 19.)

There are at least two species of birds represented among the weapons. One (Pl. XXIX, *e*) has a pointed, rath slender bill, while the other (Pl. XXX, *c*) has the massive bill and other characters of *Porphyrio melanotis*.

Finally there are the birds connected with death, Hunt says:

When a person conceived the approach of death to be near, he would select a long piece of the heart of *hake-hake*. Upon the top he would carve the figure of a bird or a fish. He would then go to a particular spot and kindle a fire with brushwood. Where the fire had died out he would stick in the *hake-hake*, and that was the place of his sepulchre.

It is probably a bird-figure similar to this that Dendy records (44, p. 130): "I was also told by a lady on the island that she had found the figure of a shag carved on hard wood in a Moriori grave. Possibly the shag was regarded as a sacred bird." It is clear that, whatever the species of the bird, it had a hooked

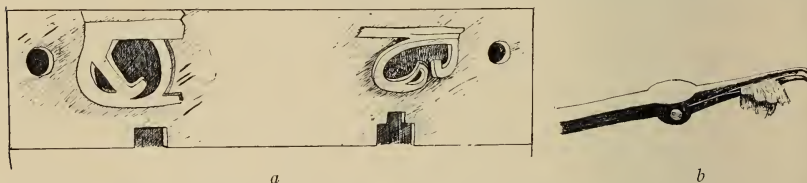


FIGURE 35.—Details of carving of *Waka-korari* (see Pl. XXXIII, *a*): *a*, at the stern; *b*, at the bow.

beak. For comparative forms we may go to Tahiti, where Wilson records the presence of a bird in wood and a fish in stone on the summit of the great *marae* or tomb of Oberea, and to the western Pacific, where the frigate-bird and the bonito are connected with the cult of the dead.

Of the three kinds of birds distinguishable, one kind—that with a flat beak—seems to be purely local, and without allied forms elsewhere. I believe it represents the Chatham Island duck. The second kind—that with a pointed bill—seems also to be local. At any rate, I do not think any related form occurs in Maori art. *Porphyrio melanotis* is undoubtedly the usual model, but in some specimens the Moriori artist seems to be copying a bird of another species, one with a much slenderer bill. The third kind of bird—that with a strongly hooked bill—is of much greater general interest than the other two, being a member of a group widely distributed in the Pacific, and especially prominent in the art of northeastern New Guinea and Massim area, Northern Melanesia, New Zealand, and Easter Island.

Behind the widely divergent renderings of this motive which appear in the art of these scattered areas, it is probable that there lies a single religious belief—namely, that the soul of the deceased person of rank passed into a bird. The feeling of awe that thus attached to the bird is perhaps reflected in the name *Manu-rau* given by the Maoris to the Polish soldier von Tempski, and in the name *Manu-katau*, given by the Morioris to Broughton. On his landing, it will be remembered, they pointed to the sun and asked, as he supposed, whether he had come thence. It is tempting to speculate as to some connection in the Moriori mind between Broughton and *Manu-i-te-ra*, the Sun-bird deity of the Maoris.

The notched ornamentation occurs on anthropomorphic pendants, on fish-hooks, on weapons of bone and stone, on the wooden handle of an *adz*, as a motive in wood-carving, and as a decorative detail in the bird and coil designs. It was nowhere observed in groups of threes or fours as often occurs in Maori art. The notches of some of the whalebone weapons were so enlarged that the spaces between assumed the form of pronounced serrations.

The human form as a motive was noted only once in decorative carving and was there insignificant. The rich decorative effects which northern Maori artists obtain by using the conventionalized human figure seems to be quite alien to Moriori art.

The coil or spiral in its simplest form (Pl. VI) seems to represent an animal, apparently a snake with open mouth. There are no snakes in the Chathams or in New Zealand, so that if this interpretation is correct the motive must have originated when the ancestors of the Morioris were living in some other part of the Pacific. The spiral or coil is present in Maori art, but where it occurs there in wood carving it is much altered, and possibly is not related to the Moriori coils at all. (See Pl. VI.) Rare related examples occur in nephrite,³³ of which figure 12, *d* is an example found at Warrington, Otago, by the late Augustus Hamilton. This example shows a tendency to converge on the outline and in the proportions of a simple fishhook. Figure 12, *c* represents the same motive as it occurs on the northeast coast of New Guinea.

In the Moriori wood carvings that have been preserved a leading part is played by this coil motive. The coils occur singly in various arrangements, joined in pairs, and joined in quartettes, but the significance which attached to each design is unknown. Where the bird motive occurs in conjunction with the coil, the birds are conventionalized and coupled breast to breast.

³³ In this material a great number of extremely skilful forgeries have been turned out by Auckland forgers. I have seen a number of bone examples, some good, some bad, but all forgeries, and it is to be expected that similar ones from Chatham Island will soon begin to appear.

A knowledge of the loop coil ("double spiral") may perhaps be indicated by a block of pumice in the Auckland Museum on which that motive is carved. This may, however, be of Maori design, as it resembles the scrawls on stone that are not uncommon in Taranaki, from which district the Maori invaders came.

The coil in the form of an elongated S, which appears on each cheek of Plate IV, *c* is also not beyond suspicion of Maori origin, though it is probably Moriori work. The few and poorly executed examples just enumerated indicate how small a part the spiral plays in Moriori art when compared with its role among the northern Maoris.

Rectilinear designs cut on bird-bone are more numerous and much more skilfully executed. Of these the best examples equal or surpass the best work done by the skilled workers in bone of Otago, New Zealand.

The most finished example of Moriori rectilinear decorative design is the small fragment of a toggle that I found at Waitangi. Scarcely below this, and

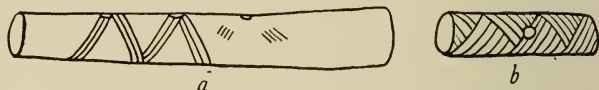


FIGURE 36.—Rectilinear decorations: *a*, on bone flute; *b*, on bone toggle from Otago (Otago University Museum).

quite complete, are the two bone toggles and the flute in the Chudleigh collection shown in Plate VIII, *h* and *i*. In all these pieces the design is clearly derived from the string binding associated with musical instruments made of wood. Presumably the design was first etched on bone flutes in imitation of a structural feature of the wooden flute and was then passed on to bone toggles.

Rectilinear designs are not restricted to work in bone. They appear as a lattice work in the wood carvings and occasionally may be seen scored on the trunks of *karaka* trees. (See fig. 9.)

CONCLUSION

We have now to pass in review the various sections of the present work and to note the direction in which the evidence of each seems to point.

Moriiori tradition yields no direct evidence as to the land from which their ancestors came to the Chathams, for place-names by themselves carry little weight, though Shand has pointed out that the identification of traditional place-names with some still existing about Tauranga appears to receive support from such tree-names as *puriri* and *kauri*. The force of this argument is greatly impaired, how-

ever, by the fact that these same tree-names occur in other parts of Polynesia, designating trees of quite different species. The Moriori traditions indicate clearly that the islands were colonized by separate canoes or groups of canoes, but the number of these successive landings and the time which elapsed between them are not indicated. If the Moriori traditions which Shand has preserved are complete and can be relied on, it would appear that there were two principal waves of migration, one in Kahu's time, or soon after, the other comprising the canoes Rangimata, Rangihoua, and Oropuke. This latter migration took place—if Moriori genealogies are to be believed—some thirty generations ago, say about the year 1175 A. D. There is no hint that any canoe came to the island after Oropuke. There is no indication of any divergence in speech between the two migrations.

As to the Maori traditions relating to the discovery and settlement of the Chathams—if there is a kernel of truth behind them it is not at present apparent. The traditions relating to "Maruiwi" that are associated with these stories of the discovery have been shown to be worthless.

In Moriori craniology a considerable amount of work has been done, the results of which indicate a close relationship with the Maoris, combined with a long period of isolation at the Chathams.

Linguistic material is abundant, but has only recently been subjected to comparative methods of study. The older generation of students believed the Moriori speech to be a dialect of Maori, but Archdeacon Herbert Williams suggests that it stands at least as far apart from Maori as Tikopian. I have suggested the Kai-tahu dialect as its nearest relative.

The Moriori social system has points which may be paralleled from many parts of the Pacific, but in some features, such as *marae* and *tuahu*, in which the Maori institution differed markedly from that of Central and Eastern Polynesia, Chatham Island and New Zealand forms are identical.

Thus the evidence of the introductory sections of this paper points, though not decisively, to New Zealand as the country from which the Moriors came to the Chatham Islands.

The evidence of material culture, which is the proper subject matter of this work is much more definite. The methods of treating flax fiber and of working it into fabrics were the same in the two groups. The highly complex method of extracting the poison from *karaka* kernels and rendering them fit for consumption was identical in both groups, but was used nowhere else in the world. The preparation of fern-root was identical, and this too was in use nowhere else. The Moriors appear to have brought with them to the islands weapons and ornaments made by the usual Maori methods from New Zealand nephrite, and conforming in

shape to common Maori types. These facts alone might be held sufficient proof of the New Zealand origin of the Morioris. But there is in addition a large amount of more detailed evidence.

The conception of the human figure expressed in Pl. IV, *a-c*, is closely allied to the conception which finds expression in the figures of Easter Island. Unfortunately, no comparative material in the round from the South Island of New Zealand has been preserved, but the correspondence between that region and the Chathams when the human figure is expressed on the flat is remarkably close. Moriori headless anthropomorphic pendants find allied forms in the cave paintings of Otago and Canterbury and in pendants from the same region, which however, are found occasionally in the North Island also. Headless human figures occur again in Hawaii, Easter Island, the Cook and Austral groups, Tonga, Fiji, the Solomons, the Admiralty Islands, and on the northern coast of New Guinea.

Turning to animal forms, the carved figure of a bird or of a fish which was placed on a Moriori grave is probably allied to the carved figures of a bird and a fish which Sir Joseph Banks saw on the *marae* (tomb) of Obereea in Tahiti, and both are probably allied to some bird and fish forms which are connected with burial rites in the North Melanesian region. The bird with a hooked beak decorating the bow of a Moriori *waka* in the Canterbury Museum is probably allied to the conventionalized birds in Maori canoe-heads and to bird forms occurring in north New Guinea and the Massim region. The round huts of the Chathams have their parallel in the round huts of the South Island of New Zealand which are frequently mentioned by the early explorers. The lean-tos and rectangular huts had parallels throughout New Zealand. Neither in New Zealand nor at the Chathams is there any record of houses of distinctively Polynesian types: throughout this area house-forms are of the kinds present in the Western Pacific and North-east New Guinea. Moriori decorative art in wood appears to have been much more realistic in character than that of the northern Maori; unfortunately southern Maori comparative material does not exist. It showed a partiality for bird forms that appears also in northern Maori art and in the Massim and northern New Guinea regions. The extremely interesting "snake" motive occurs also in New Zealand and on the north coast of New Guinea. Moriori rectilinear designs find their closest parallel in Otago. The "lattice-work" ornamentation of the Chathams occurs in Canterbury, but has not been recorded elsewhere.

All the forms of Moriori pendant are represented in New Zealand except one, which appears to be native to the Chathams. Shark-tooth knives or saws of Moriori type have been recorded in New Zealand and in Polynesia and Micronesia. The parallel which exists between Chatham and Otago bone needles

and pickers is so close that the actual record of their finding is the only way in which they can be distinguished. This is true also of the bone points of bird spears. Moriori bone fish-hooks have an individuality of their own, but show many points of resemblance to the bone hooks of the South Island and the east coast of the North Island of New Zealand. This likeness extends also to the basalt hooks of Easter Island. The bone fish-gorge of the Morioris finds its parallel in the bone gorge of the South Island, which does not seem to have been recorded elsewhere in New Zealand. A similar method of catching fish is followed in the New Hebrides.

The evidence supplied by Moriori adzes is especially interesting because it is fuller than that of any other section. The Moriori adz-helve seems to have been distinguished by a very pronounced heel, a feature of Otago specimens but apparently was not used on Northern Maori helves except in Taranaki. It appears to be characteristic of Eastern Polynesia. An adz-helve from Niue, in Western Polynesia, also presents some points of close resemblance. If any feature of material culture in the Pacific were to be named as more typically Polynesian than any other it would probably be stone adzes of Type 1. The most characteristic feature of Moriori adzes of this type is the pair of knobs at the poll. This feature is not restricted to the Chatham Islands, however, but appears also in the South Island of New Zealand, and at Nassau Island. Type 2 is less striking in appearance than Type 1, but it appears to be even more widely distributed in Polynesia and its bordering regions. There is in Dr. Haddon's collection an allied form from the upper waters of the Kaiserin Augusta River, and adzes which appear to be allied are found in many parts of Indonesia. Type 3 occurs commonly throughout the South Island of New Zealand and apparently along the east coast of the North. It has been recorded but is extremely rare elsewhere in New Zealand. It is found also in Tahiti, where it appears to be extremely common, and at Easter Island. Type 4, which is perhaps more properly termed an ax, occurs in all parts of New Zealand. The absence of any record of it in other parts of Polynesia is probably due to the comparative insignificance of its appearance rather than to its actual absence. It recalls some Melanesian and New Guinea forms, but the similarity is probably accidental, for its distal parts recall also the shape of the modern woodman's steel axe. The likeness here is due to the necessities of axe-work, and not to any genetic connection. Type 5 is found in different parts of New Zealand, but most frequently in the south. Examples of the type are recorded from the Austral Group, the Cook Islands, Tahiti, and Hawaii. Type 6 is typically Polynesian in form, but does not seem to have been figured elsewhere than in New Zealand, where it is one of the commonest types.

Type 7 is not well-defined. Examples occur in several parts of New Zealand, and in Tahiti. Type 8 is common in the south, but rare in the north of New Zealand. Type 9 appears to occur throughout New Zealand. Type 10 appears to be very characteristic of the Chathams, and is not common in New Zealand. It is the commonest of Fiji types, and seems on present evidence to be more characteristic of Melanesia than Polynesia.

Chisels of circular section are also very characteristic of the Chathams. In New Zealand they are much more characteristic of southern than of northern districts.

Turning now to *matā* or blubber knives we come to one of the most interesting features of Moriori material culture, for these tanged chert or obsidian knives find an exact parallel, even to the name, in the obsidian *matā* of Easter Island. Tanged flakes occur in all large collections from Otago, and will no doubt be found elsewhere in the South Island. The Otago examples are formed by the same technique, but are all more elongated than Moriori or Easter Island *matā*. The significance of the New Guinea blade is noted by Dr. Seligman, who says: "This blade—found in Papua—may well be a relic of the period when the ancestors of the Polynesians were passing through Melanesia to reach their homes in the Eastern Pacific."³⁴

The stone weapons—*okewa* and *pohatu taharua* are closely related to the *patu* of New Zealand, and especially to types from the southern districts. The whole genus seems to be related to the clubs of the Massim area. Groups II and IV appear to be native to the Chatham Islands, as do also several decorative details.

The fern-root pounders are of types which occur in all parts of New Zealand, but are unlike the pounders from other parts of the Pacific.

Finally, the two classes of vessel recorded among the Morioris occur also in New Zealand, where one of the ancestral forms of the *waka-korari* is still in use among the natives of the East Coast of the North Island. Rowing, which was the Moriori method of propulsion, has only once been recorded in New Zealand, and that record is from the west coast of the South Island.

The evidence derived from Moriori material culture is thus decisively in favor of the New Zealand origin of that people. It will be seen, further, that their relationship was closest with what I have elsewhere³⁵ called the southern culture of New Zealand. We do not know from what district the Moriori ancestors migrated to the Chathams, but it must have been a district in which this southern culture existed. If the Moriori genealogies are accurate and the last

³⁴ Man, No. 91, Nov. 1915.

³⁵ Polynesian Soc. Jour., vol. 30, p. 71, 1921.

communication with New Zealand occurred somewhere about the year 1200 A. D., it follows that all the most characteristic features of the southern culture were fully evolved before that date. Among them are *marae*, *tuahu*, *pa*, types of house, the processes used in preparing the fiber of *Phormium tenax*, the method employed in extracting the poison from the *karaka* kernel, a decorative art based on rectilinear designs, the knowledge of nephrite and of the methods of working it, the evolution of characteristic types of nephrite weapon and pendant, and the evolution of most of the specialized varieties of *patu*. Hence, in the seven centuries that have passed since the Moriori departure from New Zealand, the southern culture has evolved no new feature that can be ranked as characteristic. A long period, covering at the least some centuries, would be necessary for the development of these characteristics. We must therefore conclude that, if the Moriori dating is correct, the Maori occupation of New Zealand is much more ancient than has been supposed.

The question of the accuracy of the Moriori genealogies will inevitably be raised. To this it must be answered that the older generation of ethnologists in New Zealand, those who know the Maoris best, accept the genealogies of both races almost without criticism. No criticism of them on any wide basis is profitable while the great Nominal Index compiled by the Rev. H. J. Fletcher remains unpublished. The long period of isolation at the Chathams claimed by Moriori genealogies receives support, however, from several lines of evidence, the most important being the considerable degree of differentiation undergone by the Moriori language, the elaboration of the Moriori type of *twaka*, and the development, through in-breeding, of a characteristic skull-form.

It has been shown that with one important exception—that of habitations which are of west Pacific types—the Moriori culture and the southern culture of the Maoris have points of relationship far and wide in the Pacific regions and that in some respects this relationship seems closest with eastern Polynesia and particularly with Easter Island.

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THE VALUE OF THE VARIOUS AUTHORITIES

The accounts given of the discovery of Chatham Island and of the natives as they appeared to the discoverers are of very great value. Broughton's is the fuller of the two, but they both preserve an amount of accurate detailed information which is admirable, when the shortness of their visit is considered. It is not known who wrote the journal in which the second account is given, but the unknown writer obtained his information from "Mr. Johnstone, the master," who landed with Broughton.

The next writer to mention the Morioris appears to be Polack, whose information was second-hand, at nearest, and is quite worthless. In similar case is Hale, of the Wilkes Expedition, upon whom a practical joke has been played by some old sealer who supplied him with bogus information at the Bay of Islands. Dieffenbach's observations on the physiography of the island and on the state of the Morioris are valuable but his information about native habits and customs is full of errors. Biscoe's account of Moriori clothing is of interest, and confirms the evidence of Broughton and Johnston on this point.

With Frederick Hunt, one of the earliest genuine settlers at the group, we enter a new era, for Hunt was a Lincolnshire farmer who fenced and worked his land. Among authorities on the Morioris he may be ranked second to Shand, for though his education was only such as was supplied by English village schools at the beginning of the nineteenth century, he had unusual natural ability and keen powers of observation. Much information about the Morioris has been preserved in his autobiography, and it is evident that a good deal of the information published by later writers had been obtained verbally from him. H. H. Travers, the naturalist, on his first visit to the group stayed for six months with Hunt on his farm at Pitt Island, visiting Chatham Island only once, and then with Hunt as guide. It is to be supposed that much, perhaps all, of his information about the ancient customs of the Morioris as given in his papers of 1866 (11) and 1868 (13) was derived from his host. A second visit furnished further information in 1871 (17) and a third installment appeared in W. T. L. Travers' paper in 1876 (20). In none of H. H. Travers' papers are the sources of his information stated nor is any distinction drawn between what was derived from his own observation, what he obtained from the Morioris, and what he obtained from other Europeans, but this type of omission he shares with most of the writers of that time.

Welch's paper (14) is interesting from two points of view. In the first place he has preserved several important items of information recorded by no one else, and in the second place he affords one of the clearest examples of that unblushing plagiarism which appears so often among writers on the Morioris. He appears to have lived on Chatham Island for some considerable time and to have observed in great detail certain aspects of Moriori life. It is evident, however, that when writing up his notes he had before him H. H. Travers' paper of 1866, several passages of which he has appropriated almost verbatim and quite unacknowledged. The nature of this process of appropriation may be seen by comparison (11, p. 354 and 14, p. 101). As Welch was an accurate observer, and as he appears to have had in some respects better opportunities of observation than Travers, the passages in which he follows Travers may be looked on as evidence in confirmation.

W. T. L. Travers, in his paper of 1876, brought together a good deal of information, some of it new and derived from the notes of H. H. Travers, but much of it taken from previous writers. Some of the sources are acknowledged, but on pages 26 and 27, there are extensive passages, amounting to a full page, taken almost verbatim and without any acknowledgment from Hunt.

Von Haast's account of Moriori stone weapons is excellent of its kind, and much information on an allied subject is given in the brief paper by S. Percy Smith. It is much to be regretted that the latter has never published anything more than scattered notes about the group. A certain amount of information, particularly traditional, is to be found in the two papers by Gilbert Mair. Robert McNab has laid under his debt all students of the ethnology of New Zealand. All the information relating to early shipping at the Chathams has been taken from his books.

But far surpassing all the rest in volume as well as in value is the work of Alexander Shand. When the difficulties besetting the collection of material are considered, its accuracy, its detail, and its amount unite to entitle Shand to a high place among field-workers in ethnology of the Pacific. One feature of his work must be noted—namely, that he has recorded hardly any feature of Moriori life that has been put on record by other observers, and thus their material can generally be used to fill lacunae in his.

The literature relating to the material culture of the Morioris is meager. Von Haast's paper (25) is the first and, though brief, the best. S. Percy Smith's paper (31) is brief also, but contains information of value including a grinding song which has been reprinted with a note by Elsdon Best (57). Edge-Partington (27a, 36, and 38) figures some forty or fifty objects, including some of the most important described in the present work. Dendy (40) records some fresh information, and figures, carvings and several articles collected by himself. Brigham (47), who figures and describes two large and ten small adzes, makes an interesting comparison with the adzes of Hawaii. Schurtz's paper (46) is the most detailed that has appeared, but has many inaccuracies. He figures, for example, the barbed bone point of a composite fishhook, and describes it as the point of a bird spear. Not content with this he goes on to state that the Morioris were ignorant of the composite fishhook, and relied on the more primitive simple hook made of one piece of bone. This primitiveness is used to give color to his (or rather Poll's) theory of an Australoid strain in the Moriori race. Being ignorant of the closeness of the connection between Moriori material culture, and that of the southern Maoris, he derives the *okeva* from the boomerang-like clubs of the Australoid stock. Joyce (54) figures a Moriori adz. Elsdon Best (57) figures

and minutely describes a Moriori adz, while Giglioli (58) describes some fifty-four items (p. 102), six of which he figures (p. 49).

The following list of ethnographic works includes all the more important works containing information about the Morioris that have come to my notice. Some are included because, though containing no ethnological matter, they give good accounts of the geographical controls operating on Moriori culture. A considerable amount of information relating to the history of the Chatham Islands since 1840 will be found in the appendices to the Journal of the House of Parliament of New Zealand. A botanical bibliography will be found in Dr. Cockayne's paper (41), and many other scientific references appear in the bibliography in the second volume of Chilton's "The Sub-Antarctic Islands of New Zealand" (2 vols., 1909).

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A. A GROUP OF MORIORIS: FROM LEFT TO RIGHT—ROPIHA, AN UNKNOWN WOMAN, TAYLOR, AND PUNIPI.

Photograph by Grant Taylor.



B, A GROUP OF MORIORIS. FROM LEFT TO RIGHT: FRONT ROW—SOLOMON, TWO DAUGHTERS OF REWAI; BACK ROW—SON OF REWAI, T. SOLOMON (SON OF SOLOMON).

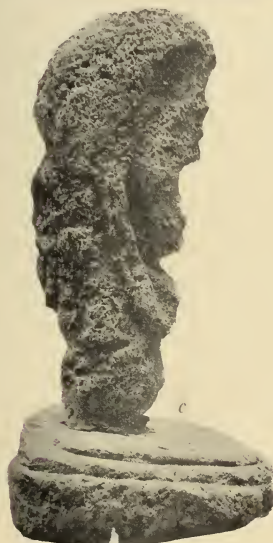
Photograph by H. Renwick.



A. FRONT AND SIDE VIEW OF A MORIORI LIVING WITH THE NGA-PUHL.
Photograph by P. H. Buck.



B. PORTRAIT OF TATU. A MORIORI.
Photograph by Archdeacon Woodthorpe.



MORIORI FIGURES CARVED IN THE ROUND: *a-c*, THREE VIEWS OF PUMICE-STONE DEITY OR *Ō VĦATU*, HEIGHT ABOUT 18 INCHES (457 MM.); *d*, TUWHĦATU OF PUMICE REPRESENTING A HUMAN HEAD. THE STRONGLY MARKED CONVEXITY OF THE NOSE IS NOTABLE. HEIGHT ABOUT 11 INCHES (279 MM.). DOMINION MUSEUM.

PLATE IV

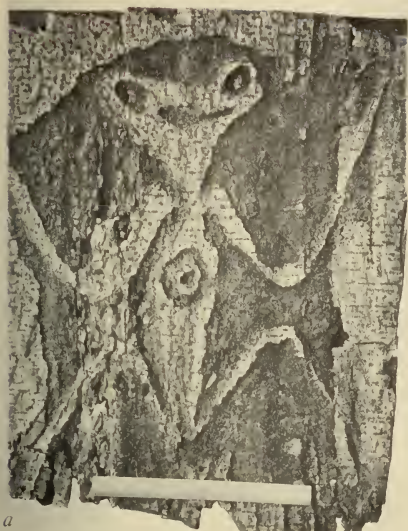
Carvings representing the human body: *a-c*, Three views of a carved wooden figure of a man. Height 41½ inches (1,055 mm.). The legs, which were inserted in the ground, have rotted away. The abdominal region is retracted, and the ribs appear to have been transferred from front to back, except one which is shown throughout. The hands rest on the lower part of the chest, the fingers not being indicated. The outline of the nose had been damaged beyond restoration. The mouth is almost dumbbell-shaped, the lips approaching closely in the middle. The chin is pointed and has three perforations, the middle one being incomplete. A hole has been drilled in the middle of the chin from the front, and another has been drilled towards it from the under surface of the chin, and each hole has been finished off as though all intention of meeting had for some reason been abandoned. The holes seem designed for the attachment of a beard. The wood is yellowish and very hard and is perhaps *ake-ake*—but it is worm-eaten and has the appearance of drift timber. The cutting suggests the use of iron tools. Canterbury Museum.—*d*, *Tuvata* of pumice representing a human face with tusklike projections from the corners of the mouth. The depression in the outline of the head between the eyes is a characteristic shared by many tree-carvings. (See p. 67.) The tusks appear occasionally in Maori carving, where some of them seem to represent the sides of the protruded tongue. Height about 6 inches (152 mm.). Cambridge University Museum. For a comparable Maori design in wood see Hamilton, *Maori Art*, p. 131.—*e*, Head carved in red stone. Height 2½ inches (64 mm.). W. O. Oldham collection.



HUMAN FIGURE AND FACE IN THE ROUND.

PLATE V

Carvings representing human figures: *a*, Human figure carved on *karaka* tree. Height about 24 inches (610 mm.). An interesting feature is the closed circle on the breast, the only known example of its use as a decorative motive by the Morioris. Canterbury Museum.—*b*, Human figure on a *karaka* tree. Height about 30 inches (762 mm.). Auckland Museum.—*c*, Human figure carved on *karaka* tree. The carving has penetrated the bark to the wood beneath. Height about 48 inches (1,220 mm.). Dominion Museum.—*d*, Painting by Miss Stoddart showing human figures carved on the bark of *karaka* or *kopi* trees. (*Corynecarpus laevigatus*). In the figure to the left the ribs are indicated, recalling figures 3, *b*, *c*, and Plate IV, *a*, *b*, *c*. Of the two figures at the right, the upper one has three fingers to each hand and three toes to each foot. There is no indication of ribs. Little care has been bestowed on carving the head.



HUMAN FIGURES CARVED ON TREE TRUNKS.

PLATE VI

Carved planks from the front of a house, or houses. Reproduced about 1/17 natural size. Dominion Museum.



CARVED HOUSE PLANKS.

PLATE VII

Pendants for personal decoration: *a*, *Rei* or mat-pin. The sharpness of the point seems to indicate that this specimen was designed for use of some kind. It belongs to the type which in New Zealand was worn as an ornament at the shoulder where the sides of the mat were drawn together. Length 6 inches (152 mm.). British Museum.—*b*, Curved *rei*. Point sharp. Length 3 inches (76 mm.). Material, rib of some mammal. Canterbury Museum. *c*, Curved *rei*. Point blunt. Length 6 inches (152 mm.). Dr. Brigham notes that the rib from which this is made is not human. Bishop Museum.—*d*, Curved *rei*. Point blunt. Length 3 inches (76 mm.). Material, whale ivory. British Museum.—*e*, Straight pendant. Point sharp. Length 6 inches (152 mm.). Material, bone. Canterbury Museum.—*f*, Curved pendant. Point blunt. Length 4½ inches (114 mm.). Material, whale tooth. Otago University Museum.—*g*, Curved pendant. Point blunt. Length 5 inches (127 mm.). Material, whale ivory. Otago University Museum. Both this and *f*, seem intended to represent some animal, a motive common in Maori pendants.—*h*, Pendant. Point sharp. Length 4 inches (96 mm.). Material, whale ivory. Otago University Museum.—*i*, Curved pendant. Point sharp. Length 8 inches (203 mm.). Material, whalebone. University Museum, Cambridge.



PENDANTS.

PLATE VIII

Pendants for personal decoration: *a*, Bone pendant. Length 3 inches (76 mm.). Material, fine whalebone. This pendant may possibly be a further degeneration from the anthropomorphic forms shown in figures 17 and 18. Cambridge University Museum.—*b*, Part of necklace of shark's teeth, length $1\frac{7}{8}$ inches. Auckland Museum. *c*, Pendant in the form of a *mata*, made from a beautifully colored piece of porphyritic rock. Length about $2\frac{1}{2}$ inches. Otago University Museum.—*d*, This pendant is of the usual Maori type, but the amount of weathering it had undergone when found by Mr. Chudleigh seems to indicate considerable antiquity. Length $2\frac{1}{4}$ inches. Chudleigh collection.—*e*, Bone pendant in the form of a bird with curved beak. Length 2 inches (51 mm.). A much more massive but rather weathered example of this type is in the Dominion Museum collection. Chudleigh collection.—*f*, Pendant made from a red stone. Length $2\frac{3}{4}$ inches (70 mm.). It is clear from Moriori traditions that red was a favorite color. Canterbury Museum.—*g*, Stone pendant in the form of a fishhook. It is beautifully cut from gray basalt and is the best example of work in this material that I have ever seen. There are two of these in the Chudleigh collection, and a third example of this type but smaller is in the Auckland Museum. Maximum horizontal diameter of pendant $4\frac{1}{2}$ inches (220 mm.). Chudleigh collection.—*h-i*, Toggles or fasteners, made from the wing-bone of the albatross. Length respectively 2 inches and $1\frac{1}{2}$ inches. The one from the Chudleigh collection, (*i*), is ornamented with a rectilinear design beautifully executed and has a smaller hole on each side of the large one, a unique feature. The specimen in the Otago University Museum, (*h*), was originally very skilfully decorated with a series of incised lozenges, which have, however, been almost obliterated by weathering. I found a fragment of another, similarly decorated, in the sandhills at Waitangi.—*j*, Bone pendant representing a bird's head with beak recurved. Length 7 inches (178 mm.). I doubt the authenticity of this example. The inlaid *pawa* of the eye, and the flax string, at any rate, are modern. Dominion Museum.—*k*, The two holes in this specimen are obviously intended for suspension, and it is on this ground that it is included among the pendants. It is highly probable, however, that it was designed for another purpose. Shand states (56, p. 99), that Moe brought with him to the Chatham Islands a greenstone weapon called *Toki a Rei Meitei*. *Toki* means "adz," and it is well known that the Maoris occasionally used the adz as a weapon, the blade being almost invariably made of greenstone. Shand's conclusion that Moe's *toki*, which was last seen about a century ago, was really not a *toki* but a *mere* (club) is only a conjecture. The specimen has the usual characteristics of a Maori fighting adz, and it does not seem extravagant to claim it as the *Toki a Rei Meitei* of Moriori tradition. Length 6 inches. Chudleigh collection.—*l*, Pendant of spongy whalebone. Length about $7\frac{1}{2}$ inches (127 mm.). This object has been very fully described by Dendy, who concludes that it is a Moriori bull-roarer. Against this it may be pointed out that it is extremely doubtful whether such bone could be made to "roar." Unfortunately it is in its present state too friable for experiment. In the second place, the neck shows no signs of the attrition that must have resulted if the object were whirled continuously on a string. And finally, there is no very close correspondence between its shape and that of any known bull-roarer. It may with greater probability be classed as a pendant or as a toy. It appears to be a conventionalized representation of the class of weapon exemplified by Plate XXIX *d, f*. The distal edge in each is flat, the edges are serrated except at the grip, and in both the butt has two knobs. The central ridge is not present in this weapon, but it appears in other weapons.



PENDANTS AND TOGGLES.

PLATE IX

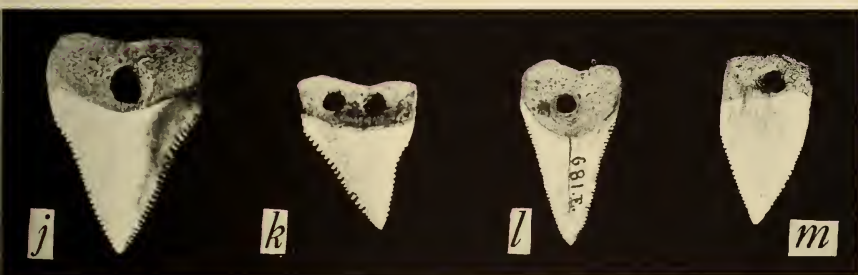
Needles and pickers: *a*, Needle of albatross bone. Length $8\frac{1}{2}$ inches (216 mm.). The hole was drilled through only one side of the bone in order to keep the knot on the string within the body of the needle. All the perforations noted in Moriori needles made from bone with a cavity are similar to this. Bishop Museum.—*b*, Bone needle. Length $10\frac{1}{2}$ inches (267 mm.). Bishop Museum.—*c*, Bone needles. Length $7\frac{3}{4}$ inches (196 mm.). It seems to have been made from an albatross wing-bone and has been ground into shape very skilfully. The perforation appears to be through one side of the bone only. Canterbury Museum.—*d*, Bone implement. Length 9 inches (228 mm.). Dr. Dendy was informed by settlers that this and the other examples figured are shellfish openers, and this is the use generally assigned to them by collectors in New Zealand. British Museum.—*e*, Two pickers, the upper mammalian, the lower bird bone. Length $3\frac{1}{2}$ inches. British Museum.



NEEDLES AND PICKERS.

PLATE X

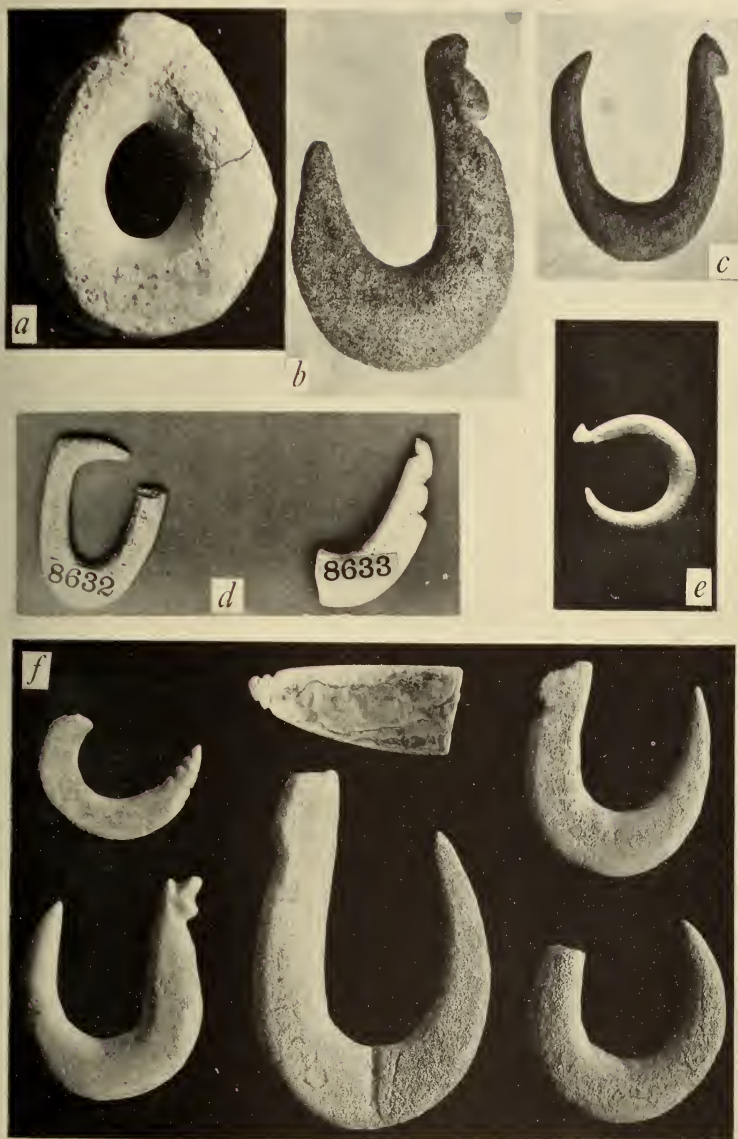
Bone points of bird spears and sharks' teeth from knives: *a, b, c, d*, Spear points made from bone of some sea mammal. Length, respectively, 3, $3\frac{1}{4}$, 4, 5 inches (76, 95, 101, 127 mm.). Canterbury Museum.—*e*, Barbed bird-spear point. Length 5 inches (127 mm.). It appears to be made of the wing-bone of an albatross, the most compact and strongest of all available bone, and the point is in consequence the slenderest of those figured. British Museum.—*f*, Barbed bone bird spear point. Length 4 inches (101 mm.); back edge ornamented with notes. Otago University Museum.—*g*, Barbed spear point. Length 4 inches (101 mm.). The barbs are arranged alternately on either side. Bishop Museum.—*h*, Spear point. Length $3\frac{3}{4}$ inches (95 mm.). The barbs are arranged in pairs on opposite sides, and the execution of the whole piece indicates a high degree of skill on the part of the Moriori workman. Bishop Museum.—*i*, Barbed bird-spear point. Length $7\frac{1}{2}$ inches (190 mm.). The bone from which it is made is denser than that of those figured, except *e*, and may be human. British Museum.—*j-m*. Sharks' teeth from knives or saws. About natural size.—*j* and *k*, Cambridge University Museum.—*l*, Auckland Museum.—*m*, Bishop Museum.



BONE POINTS OF BIRD SPEARS AND SHARK TEETH FROM A WEAPON OR A SAW.

PLATE XI

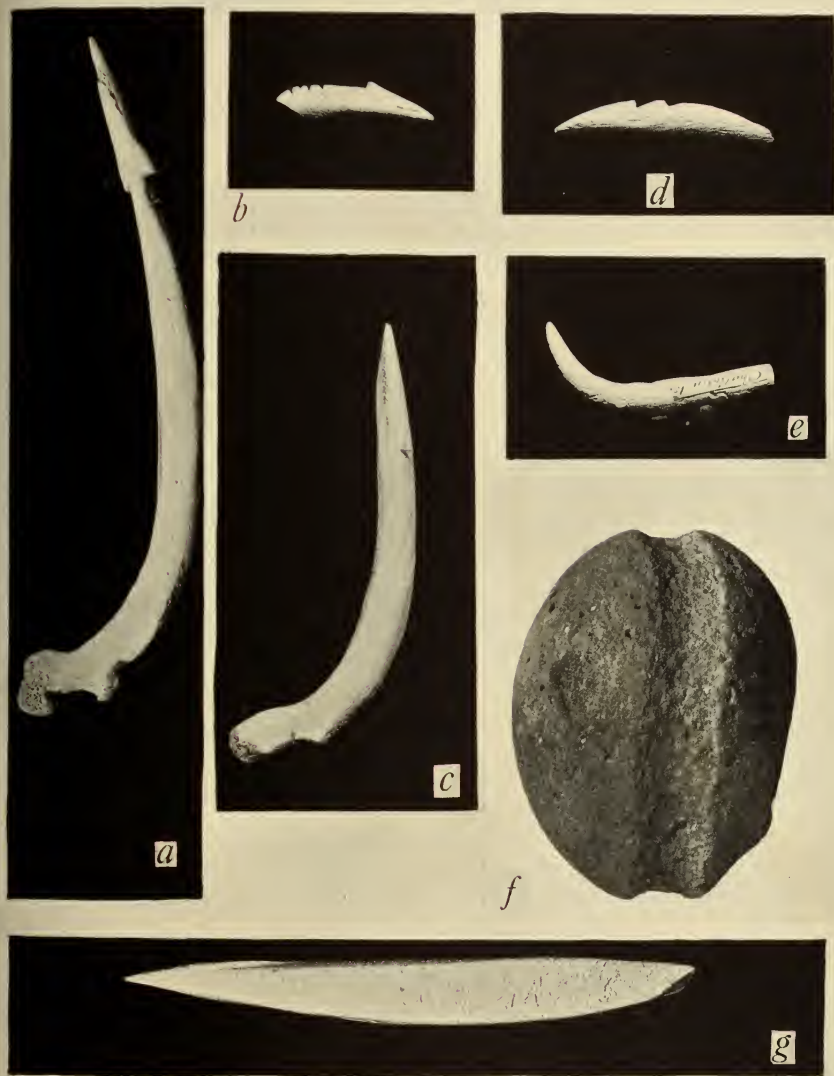
Simple bone fishhooks: *a*, Unfinished simple bone fishhook, illustrating process of manufacture. Length $2\frac{1}{2}$ inches. Canterbury Museum.—*b-c*, Unfinished bone fishhooks, illustrating a stage in the process of manufacture. Length $3\frac{1}{8}$ inches and 2 inches. Four-fifths natural size. Dominion Museum.—*d*, Simple bone fishhooks. About two-thirds natural size. At one stage in the manufacture of the hook marked 8632 a drill was probably used. Bishop Museum.—*e*, Simple bone fishhook. Three-fourths natural size. In its manufacture a drill has probably been used. Chudleigh collection.—*f*, Series of simple bone fishhooks. Natural size. At the center top is a piece of *parva* (*Haliotis*) shell which has been used as the lure of a composite hook. It belongs to a type of composite hook which does not occur in the Otago region, but is exceedingly common in North Island where it is still used by the Maoris, though a metal point has long been substituted for one of bone. It is probable that this piece is of Maori make. Canterbury Museum.



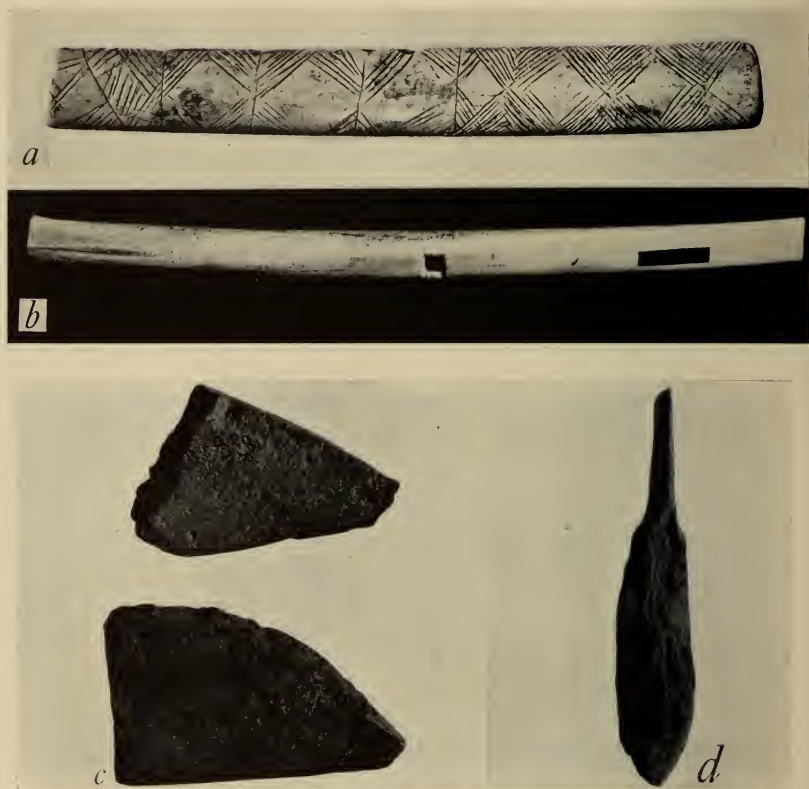
BONE FISH-HOOKS IN ONE PIECE.

PLATE XII

Fishhooks, sinker, and gorge: *a*, The shank of a composite hook. Length about $6\frac{1}{2}$ inches (265 mm.). Made from a rib of some sea mammal. The lower end is shaped to hold the binding, by which the point was attached. The upper end is notched in the form of a barbed arrow for the attachment of a line. British Museum.—*b*, Barbed bone point of composite fishhook. Length $1\frac{1}{2}$ inches. Chudleigh's collection.—*c*, The unbarbed point of a composite hook. Length about 4 inches (101 mm.). Material, the rib of some sea mammal. The shank was probably of wood. The hook must have been an unusually large one. British Museum. *d*, Barbed point. Length 2 inches. Chudleigh collection.—*e*, Unbarbed point of composite hook made from part of the lower jaw of some small sea mammal. Length $2\frac{1}{4}$ inches. Like *a* and *b* it belongs to a type common in the South Island of New Zealand, but as no wooden shank has been preserved either there or at the Chatham Islands we can only conjecture the shape of the hook to which each belonged. It is probable that *b* and *d* were attached to curved wooden shanks resembling in shape the bone "simple" hooks and made as described by Renwick (p. 83). *e* was probably attached to a straight wooden shank of the kind which Mr. Renwick saw Heta using. Otago University Museum.—*f*, Stone net sinker $3\frac{1}{2}$ inches (89 mm.) in length. Canterbury Museum.—*g*, Bone fish gorge 6 inches (152 mm.) long.—British Museum. Mr. Johannes Anderson says that articles of this kind were used in a game resembling "spillikins" which he recently saw played by an old Maori. The Otago evidence seems to support this suggestion.



FISH-GORGE, SINKER, PARTS OF COMPOSITE FISH-HOOKS.



BONE AND STONE IMPLEMENTS: *a*, BONE FLUTE DECORATED WITH RECTILINEAR FIGURES. LENGTH 7 INCHES (177 MM.). CHUDLEIGH COLLECTION.—*b*, UNFINISHED BONE FLUTE. LENGTH 9½ INCHES (241 MM.). BISHOP MUSEUM.—*c*, CUTTERS MADE OF STONE. THREE-QUARTERS NATURAL SIZE. OTAGO UNIVERSITY MUSEUM.—*d*, SANDSTONE FILE. LENGTH 7¼ INCHES (184 MM.). CANTERBURY MUSEUM.



a. BLOCK OF GREENSTONE ILLUSTRATING THE PROCESS OF SAWING. LENGTH $5\frac{1}{2}$ INCHES; SAW CUT $\frac{1}{2}$ INCH DEEP, $\frac{3}{16}$ INCH WIDE AT THE TOP, $\frac{1}{16}$ INCH WIDE AT THE BOTTOM. DOMINION MUSEUM. *b.* BACK AND SIDE VIEWS OF AN UNFINISHED ADZ FROM PITT ISLAND, ILLUSTRATING THE PROCESS OF FLAKING AND CHIPPING. LENGTH $12\frac{1}{2}$ INCHES (318 MM.). DOMINION MUSEUM. *c.* THREE GRINDING STONES. RIGHT-HAND SPECIMEN, LENGTH $10\frac{1}{2}$ INCHES (267 MM.). THE HOLLOWES APPEAR TO HAVE BEEN USED TO POLISH CHISELS OF CURVILINEAR SECTION. LEFT-HAND SPECIMEN SHOWS SIDE VIEW. DOMINION MUSEUM. *d.* GRINDING STONE. LENGTH ABOUT 7 INCHES. THE HOLES ARE PRESUMABLY FOR CORDS TO FACILITATE CARRYING. BISHOP MUSEUM.

PLATE XV

(For terminology see fig. 39)

Hafting of adzes and unfinished adz of Type I: *a-c*. Hafted Moriori adz. Length of shaft, $19\frac{1}{2}$ inches (495 mm.); length of foot $9\frac{3}{4}$ inches (247 mm.). The shaft has no knob at the head; the foot appears to be grooved to hold the lashing. The heel is much more marked than those of the Maori adz handles preserved in museums, though this feature appears in all known southern examples. The handle appears to have been made from a branch and part of the trunk of a tree, the branch forming the shaft and part of the trunk forming the foot. According to Best (57, p. 101) the Maoris used a secondary branch for the shaft, the foot being cut from part of a primary branch. The method of attachment appears to be that appropriate to Types II, IV, and V. The binding is made of three thongs of undressed *Phormium tenax* forming a simple plait. The cord at one end has been securely tied to the shaft, then passed forward to the proximal end of the groove, taken round the poll of the adz and bound tightly round adz and foot some 14 times, covering the whole of the groove, then pulled taut and passed between the toe and the adz. The cord has then been passed back over the binding on the face of the adz, passed round the shaft again, and brought back and passed round the poll of the adz and the proximal part of the foot in seven taut loops, which are set at a different angle from that at which the first series of loops were set. The method of finishing off is not apparent. To tighten the binding a small wooden wedge is driven between adz and binding, and the whole binding is so arranged as to tighten on the adz whenever a blow is struck. Dominion Museum.

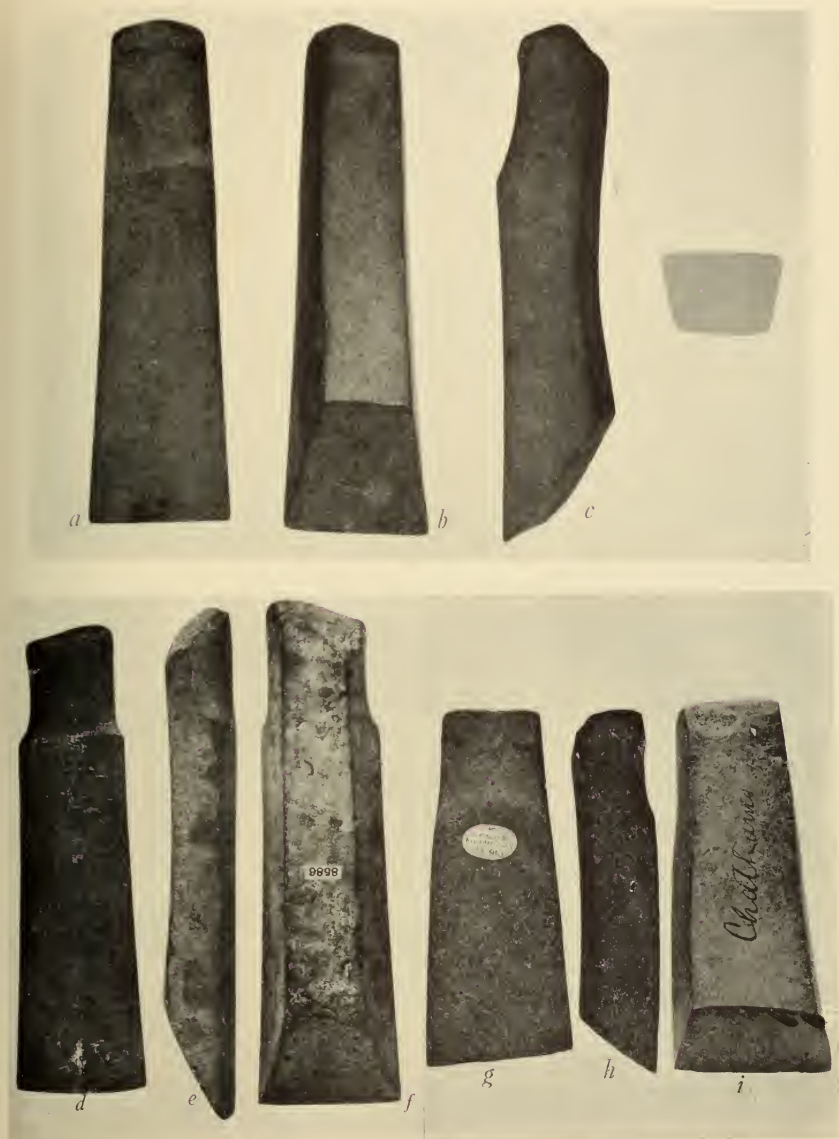
b. An adz handle, extreme length 33 inches, apparently of considerable age, the shape and decoration suggest that its purpose was ceremonial. The heel is very pronounced, and the angle between foot and shaft is so acute as to impair considerably the usefulness of the implement. The proximal end of the shaft is ornamented with a slight knob, the outline of the heel by notches and knobs, and the junction of the shaft and foot by two notched ridges, which form an acute angle. These notches have been picked out with chalk, but this appears to be recent. The foot from toe to heel is in one plane. Mr. W. H. Skinner notes that the wood is *ake-ake*. Kinsey collection.—*d-e*. Unfinished adz showing process of flaking, chipping, and bruising. Length $15\frac{1}{4}$ inches (387 mm.), cutting edge $4\frac{1}{4}$ inches (107 mm.), width at poll $1\frac{1}{4}$ inches (31 mm.), thickness at bevel shoulder 2 inches (51 mm.). The setting of the part towards the poll at an angle with the rest of the tool is a characteristic extremely common in Hawaiian adzes. A similar shape is occasionally seen in Maori adzes, and a tendency in the same direction appears in most Moriori adzes of this type. The front is slightly concave, a characteristic also of a large unfinished adz in the possession of Mr. J. Ritchie. Dominion Museum.



HAFTED ADZ, HELVE OF UNFINISHED ADZ

PLATE XVI

Adzes of Type I: *a-c*, Type specimen. Length 14 inches (356 mm.), cutting edge 4 inches (101 mm.), width at poll $2\frac{1}{2}$ inches (64 mm.), thickness at bevel shoulder $2\frac{1}{2}$ inches (64 mm.). Two pronounced knobs at poll. Material, light-gray tuff. British Museum.—*d-f*, Length $13\frac{7}{8}$ inches (353 mm.), cutting edge $3\frac{3}{4}$ inches (95 mm.), width at poll 3 inches (76 mm.), thickness at bevel shoulder $1\frac{1}{2}$ inches (38 mm.). The two knobs at the poll are not very pronounced. Weight 6 pounds, 7 ounces. "Of a remarkable fine finish, surpassing, in some respects, any Pacific Ocean adzes I have seen. Even the tang is rounded to suit the cord that attached it to the handle. The front is slightly convex, and the blade is consequently curved, but the other sides are true as if planed. The material is a hard, brittle, steel-gray, volcanic stone." (Brigham, B. P. Bishop Mus. Mem., vol. I, No. 4, 1902.) Bishop Museum.—*g-i*, Moriori adz. Length 7 inches (178 mm.), cutting edge $2\frac{4}{5}$ inches (71 mm.), width at poll 2 inches (51 mm.), thickness at bevel shoulder $1\frac{1}{4}$ inches (31 mm.). Poll knobs developed. Cutting edge not quite at right angles to long axis, which seems due to resharpening. Material, gray tuff. British Museum.



ADZES: TYPE I.

PLATE XVII

Adzes of Type I: *a-c*, Moriori adz, described in detail by Best (57, p. 268 and Pl. XXI, fig. 85 *b*). "This adz is smooth and well-formed. Length 6 inches, width $1\frac{13}{16}$ inches across the cutting edge, decreasing evenly in width back to the poll, where it is $1\frac{1}{4}$ inches wide on the face and $\frac{3}{4}$ inch wide on the back. Thickness at the shoulder $\frac{3}{4}$ inch, a dimension preserved to within $1\frac{1}{4}$ inches of the poll, where the face has been reduced to facilitate hafting. As is usual in Maori forms the face is convex longitudinally and transversely and the back is straight longitudinally, but slightly convex transversely. The sides are concave longitudinally to an extremely slight degree. Because of the sloping sides, the back is $\frac{1}{2}$ inch narrower than the face. The blade from cutting-edge to shoulder is $1\frac{1}{4}$ inches long and shows an angle of about 50° on its lower part. On the face a short bevel of $\frac{1}{4}$ inch has been ground to form a keen, flawless cutting edge, an unusual feature, that may be the result of grinding out a former gap in the edge. The chief peculiarity of this tool is the poll, which has two horns or projections which could only have been formed by rasping with a narrow piece of sandstone. The butt end of the face has been ground down for a length of $1\frac{1}{4}$ inches with the exception of these two lugs, which would certainly much assist the retention of the tool by the lashing. The tool has been exposed to drifting sand which has given the surface, except the blade, the curious aspect of worm-eaten timber. Material, fine grained black stone. Weight 9 oz. Dominion Museum."—*d-f*, Moriori adz from Lake Taraha. Length $14\frac{1}{2}$ inches (368 mm.), cutting edge $4\frac{1}{4}$ inches (107 mm.), width at poll $2\frac{1}{4}$ inches (70 mm.), thickness at bevel shoulder $1\frac{1}{2}$ inches (38 mm.). Knobs at poll scarcely indicated. Grip much less marked than is usual for type I. Front slightly concave longitudinally. Material, gray lava. Found with human bones. Auckland Museum.—*g-i*, Moriori adz. Length $8\frac{1}{2}$ inches (216 mm.), cutting edge 2 inches (51 mm.), width at poll 2 inches (51 mm.), thickness at bevel shoulder 1 inch (25 mm.). Poll knobs not indicated. "Flat on all sides. The material is hard brittle, steel-gray, volcanic stone." (Brigham, B. P. Bishop Mus. Mem., vol. 1, p. 417.) Weight about $1\frac{1}{2}$ pounds. This adz appears to be the work of the same craftsman who made the adz shown in Plate XVI, *d, c, f*, Bishop Museum.



a



b



c



d



e



f



g



h



i

PLATE XVIII

Adzes of Type II: *a-c*, Type specimen. Length $9\frac{3}{8}$ inches (236 mm.), cutting edge $2\frac{3}{8}$ inches (60 mm.), thickness $\frac{3}{4}$ inch (20 mm.). Front convexly curved transversely and longitudinally. Seen from above, edges of front curve convexly so that greatest width of face—63 mm.—is about 30 mm. behind cutting-edge. Width at poll $1\frac{9}{16}$ inches (40 mm.). Poll curved symmetrically and well ground to shape. Cutting edge slightly curved when seen from above and from front. The sides are convexly curved transversely and longitudinally, and converge slightly towards the back. The bevel merges into the back. Cambridge University Museum.—*d-e*, Front and side view of adz. Length 6 inches (152 mm.), cutting edge $1\frac{1}{2}$ inches (38 mm.), width at poll two-thirds of an inch (15 mm.), maximum thickness two-thirds of an inch (15 mm.). Material, gray tuff. The stone from which this example is made was sawn from a larger block, as is indicated by marks on the sides. British Museum.—*f-g*, Front and side views of adz. Length 6 inches (152 mm.), cutting edge $1\frac{1}{2}$ inches (38 mm.), width at poll eleven-twelfths of an inch (22 mm.), maximum thickness 1 inch (25 mm.). British Museum.—*h-i*, Back and side view of adz. Length $6\frac{2}{3}$ inches (173 mm.), cutting edge 2 inches (50 mm.), width at poll $1\frac{1}{3}$ inches (34 mm.), maximum thickness three-fifths of an inch (16 mm.). Dominion Museum.



ADZES: TYPE II.

PLATE XIX

Adzes of Type II: The 10 adzes of Type II here illustrated are in the Bishop Museum. The following details are given by Brigham. (B. P. Bishop Mus. Mem. Vol. I, No. 4.)

No.	Length	Cutting-edge	Weight	Notes
8587	8.5 inches	2.8 inches	1 lb. 13 oz.	Reticulated lava with much olivine
8588	5.6 "	2.5 "	.. 8.2 "	Thin
8589	6.0 "	2.2 "	1 lb.	—
8590	4.6 "	1.9 "	.. 6.0 "	—
8591	2.9 "	1.2 "	.. 2.7 "	Thin; edge reground
8592	6.5 "	2.5 "	.. 9.0 "	—
8593	2.9 "	1.2 "	.. 2.7 "	—
8594	2.9 "	1.6 "	.. 3.0 "	—
8595	2.3 "	1.6 "	.. 3.0 "	Angular edges
8596	3.7 "	1.7 "	.. 5.5 "	Rudely finished

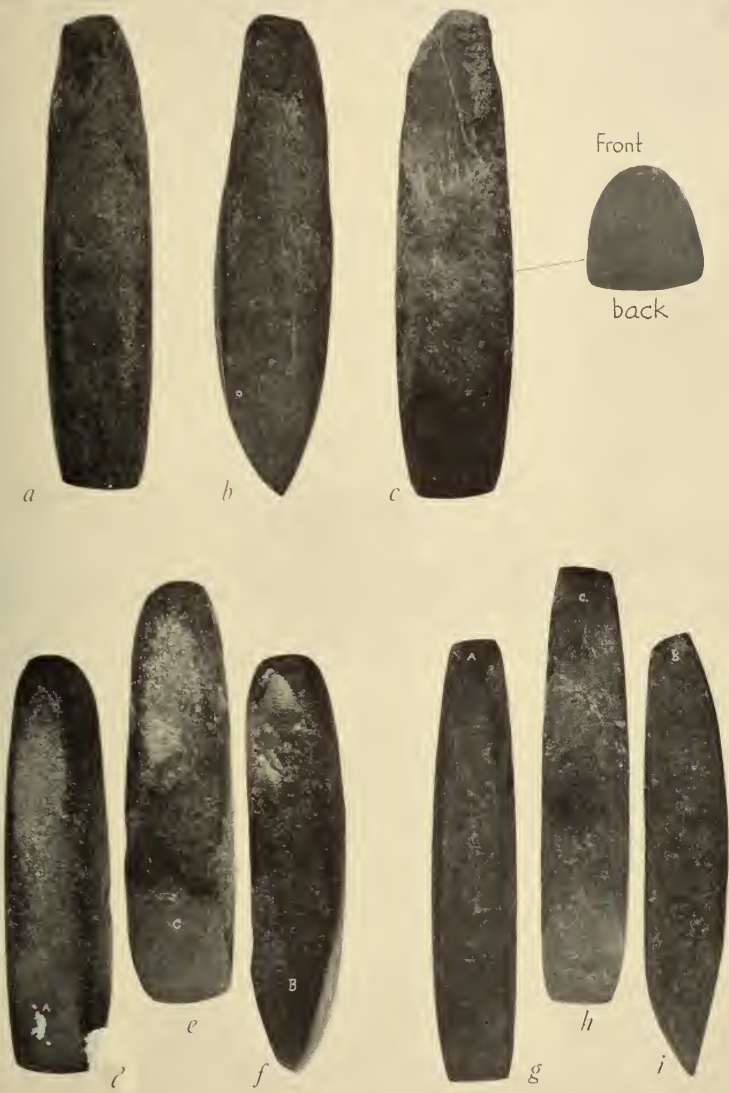
"The material is a volcanic stone containing considerable masses of olivine, often coloured red by decomposition. I have not recognised this stone in any other adzes, and I do not know whether it is found on the Chatham group."



ADZES: TYPE II.

PLATE XX

Adzes of Type III: *a-c*, Type specimen. Length $8\frac{3}{4}$ inches (222 mm.), cutting edge $1\frac{1}{6}$ inches (29 mm.), width at poll $1\frac{1}{6}$ inches (29 mm.), maximum thickness $1\frac{2}{3}$ inches (42 mm.). The bevel merges into the back. The sides converge from the back towards the front, which is represented by a sharply curved surface. The front is convexly curved longitudinally. British Museum.—*d-f*, Adz. Length 8 inches (218 mm.). Canterbury Museum.—*g-i*, Adz. Length 8 inches (218 mm.). A fairly well-defined grip, not very clearly shown in the photograph, and this indicates that one method of hafting was similar to that shown in figure 41. In addition to the specialized grip, either side of the front has been pecked down to a point about 2 inches from the cutting edge, with the obvious intention of holding a flax binding tied in a manner entirely different from that shown in figure 41, and perhaps similar to that indicated by figure 49, which represents a hafted Maori example of the same type. Canterbury Museum.



ADZES: TYPE III.

PLATE XXI

Adzes of Type IV and Type V: *a-c*, Type specimen of Type IV. Length $5\frac{3}{8}$ inches (136 mm.), cutting edge $2\frac{1}{16}$ inches (53 mm.), thickness $1\frac{1}{8}$ inches (29 mm.). The flat poll measures $1\frac{1}{4}$ inches (32 mm.) across and from it the implement expands towards the cutting-edge. Seen from above the cutting edge has a marked convex curve. Seen from in front or from the side it is straight. The general finish is indifferent. Museum of Archaeology and Ethnology, Cambridge.—*d*, Side views of adz of Type IV. Length $4\frac{7}{10}$ inches (120 mm.), thickness $1\frac{7}{10}$ inches (44 mm.). Canterbury Museum.—*e-f*, Type specimen of Type V. Length $9\frac{3}{4}$ inches (247 mm.), cutting edge $2\frac{3}{4}$ inches (70 mm.), width at poll about $1\frac{1}{4}$ inches (31 mm.), thickness where bevel terminated 1 inch (25 mm.). The triangular bevel is slightly concave transversely and imparting a corresponding curve to the cutting edge. Grip slightly developed. The sides converge to such an extent that the back is represented by the line of their intersection. Dominion Museum.—*g-h*, Adz of Type V. Length 10 inches (254 mm.), cutting-edge $2\frac{1}{2}$ inches (64 mm.), width at poll about $1\frac{1}{4}$ inches (31 mm.), maximum thickness $1\frac{1}{4}$ inches (31 mm.). Grip slightly developed, the sides converge and curve into each other. Dominion Museum.



ADZES: TYPE IV AND TYPE V.

PLATE XXII

Adzes of Type VI: *a-c*, Type specimen. Length $8\frac{1}{4}$ inches (307 mm.), cutting edge 3 inches (1708 mm.), width at poll $1\frac{1}{4}$ inches (47 mm.), thickness $1\frac{1}{8}$ inches (40 mm.). The cutting edge as seen from above is straight. The front has a very slight convex curve longitudinally and transversely. The poll is flat. The grip is developed in a manner which is characteristic of this type, the front continuing to the poll in the same plane. The angles where front meets sides have at this point been slightly beveled, and the surfaces thus made have been left bruised so that the binding may not slip. The sides have a very slight convex curve longitudinally and transversely. Longitudinally the back is slightly concave; transversely it is convex. The bevel is concave transversely, imparting a corresponding curve to the cutting edge when seen from in front. Cambridge University Museum.—*d-c*, Adz of Type VI. Length 14 inches 352 mm.), cutting edge $4\frac{1}{4}$ inches (100 mm.), thickness $1\frac{1}{2}$ inches (36 mm.). One of the finest examples of Moriori workmanship. Otago University Museum.—*f-g*, Adz of Type VI. Length $6\frac{1}{2}$ inches (160 mm.), cutting edge $3\frac{1}{4}$ inches (77 mm.), thickness $\frac{7}{8}$ inch (22 mm.). Otago University Museum.



ADZES: TYPE VI.

PLATE XXIII

Adzes of Type VII and Type VIII: *a-b*, Type specimen of Type VII. Length $8\frac{3}{4}$ inches (322 mm.), cutting edge $1\frac{3}{16}$ inches (30 mm.), width at poll 2 inches (51 mm.), maximum thickness $1\frac{3}{4}$ inches (44 mm.). Front and sides have slight convex curve, transversely; back is flat. Longitudinally all faces have marked convex curve. The bevel is formed by an accentuation of the curve of the back. The grip is defined. British Museum.—*c-d*, Adz of Type VII. Length $7\frac{5}{6}$ inches (198 mm.), cutting edge $1\frac{5}{6}$ (46 mm.), width at poll $1\frac{2}{3}$ inches (43 mm.), thickness $1\frac{1}{16}$ inches (28 mm.). British Museum.—*e-g*, Type specimen of Type VIII. Length 10 inches (260 mm.), maximum breadth $2\frac{1}{4}$ inches (60 mm.). Both front and back are convexly curved, transversely and longitudinally. Grip well developed. There is a distinct ridge along the distal margin of the grip and a less defined one on its proximal margin. The finish is poor. Hafting probably followed the method of figure 19, *c*. Otago University Museum.



ADZES: TYPE VII.



ADZE: TYPE VIII.

PLATE XXIV

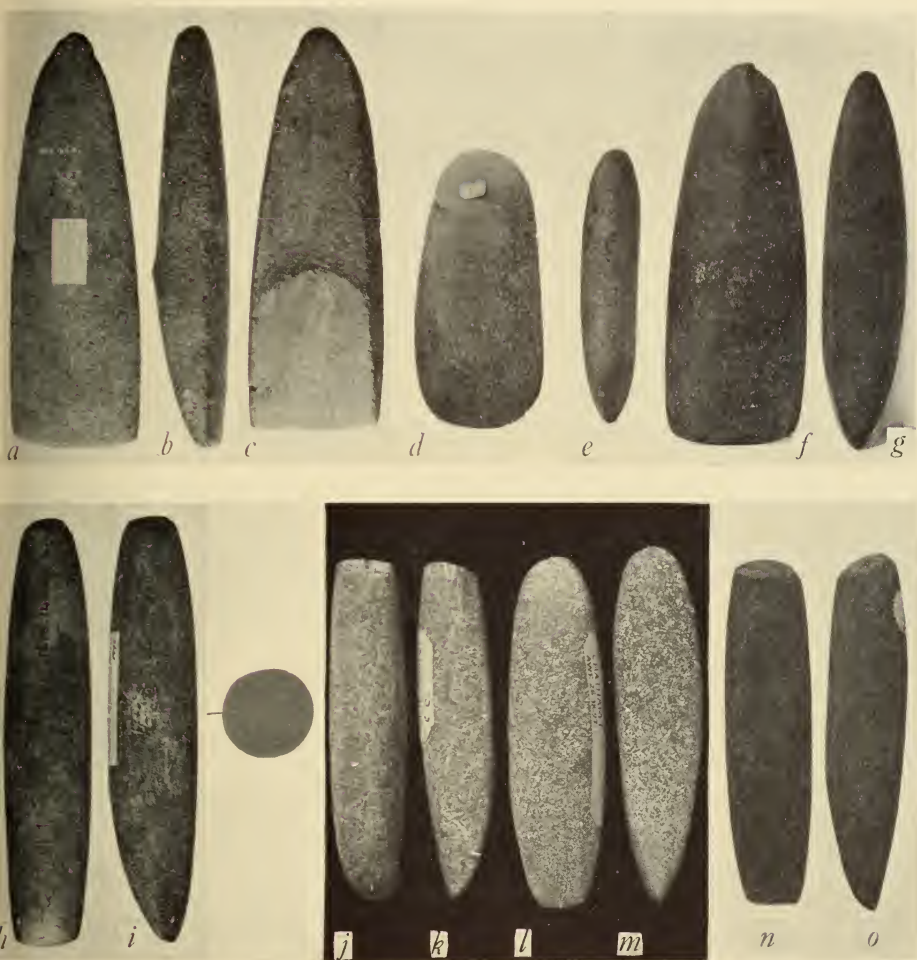
Adzes of Type IX and Type X: *a-c*, Type specimen of Type IX. Length $14\frac{1}{2}$ inches (350 mm.), maximum breadth $4\frac{3}{4}$ inches (95 mm.), thickness 2 inches (50 mm.). The adz is unfinished; its final shape probably would have been more rounded in outline than is commonly the case either in New Zealand or in the Chatham Islands. This type of implement seems to have been hafted axially and used as a horizontal punch, driven by more than one man (See also fig. 25, *a*.) Otago University Museum.—*d*, Adz of Type X. Length $5\frac{7}{8}$ inches (150 mm.), cutting edge seven-eighth of an inch (23 mm.), minimum diameter 1 inch 25 mm.), Limestone. Auckland Museum.—*e*, Type specimen of Type X, from Opuhi, near Owenga, Chatham Islands. Percy Smith (31, p. 81) thus describes this specimen: "A *whao* or chisel, used for boring holes in canoes or in other wooden material, such as the *koua* or wooden stern-post of the Moriori raft. It is 7.5 inches long with a mean circumference of 3 inches. It is cylindrical in shape, and has a slight curve in its length; it is fairly well polished and formed of light-gray close-grained volcanic rock." The illustration accompanying Mr. Smith's account shows the curve in the length more clearly than does the figure reproduced here and also indicates that the circular cross-section has been rounded down from one which more nearly approached quadrangular. These facts, together with the size of the implement, render it unlikely that the tool is a chisel and indicate the probability that it was hafted as an adz. Auckland Museum.—*f-g*, Adz of Type X. Length $4\frac{1}{2}$ inches (115 mm.), cutting edge half an inch (12 mm.), diameter three-quarters of an inch (20 mm.). Dominion Museum.—*h-j*, Three implements from Pitt Island. The stone from which *h* is made has been sawn out. Kinsey collection.



ADZES: TYPE IX AND TYPE X.

PLATE XXV

Mori adzes of various forms, and chisels: *a-c*, Unclassified adz. Length 7 inches (178 mm.). Cambridge University Museum.—*d-e*, Unclassified adz. Length 5 inches (127 mm.). Otago University Museum.—*f-g*, Unclassified adz. Length 6½ inches (165 mm.). Otago University Museum.—*h-i*, Two views of a chisel. Length 3½ inches (90 mm.). An unusually large specimen. Cambridge University Museum.—*j-k*, Chisel. Length 3 inches (75 mm.). British Museum.—*l-m*, Chisel. Length 3 inches (75 mm.). British Museum.—*n-o*, Chisel. Length 3 inches. (75 mm.). Dominion Museum.



UNCLASSIFIED ADZES AND CHISELS.

PLATE XXVI

Flint knives (*matā*): *a-b*, Two views of *matā* with handle, illustrating the method of hafting. Length 11 inches (280 mm.) This, though an old example, was probably made for sale to Europeans. Dominion Museum.—*c*, Hafted *matā*, showing adaptation of handle to fit blade. Modern. Length 16 inches (406 mm.). Canterbury Museum.—*d*, Two views of a flint knife. The face of the nucleus appears to have been flaked into shape, after which the knife was detached with a single blow, a method of manufacture shown also by a specimen in the Dominion Museum. Both faces appear to have received a secondary dressing in the region of the tang. Three inches x 5½ inches (76 mm. x 140 mm.). British Museum.—*e*, Two views of a flint knife. Both sides have been flaked into shape. Length of cutting edge 7 inches (178 mm.). Kinsey collection.—*f*, (upper figure.) Chert knife. Length 3½ inches (89 mm.). This appears to belong to the type described by Shand (56, p. 2) as being sometimes worn as a pendant: "A choice piece of flint used as a knife, notched to form a handle, and suspended round the neck, with a *muka* string tied to the handle." British Museum.—*f*, (lower figure.) Knife of micaceous schist. Length of cutting edge 9½ inches (241 mm.). Hodgson collection.—*g*, Five knives of various materials. Scale 2:6. The two implements with serrated edges represent an unusual type. The obsidian knife in the upper left corner is interesting; it suggests comparison with the obsidian *matā* of Easter Island. Canterbury Museum.

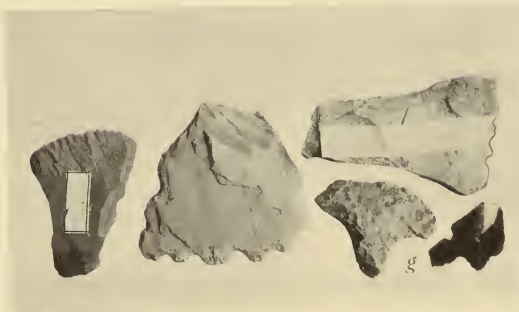
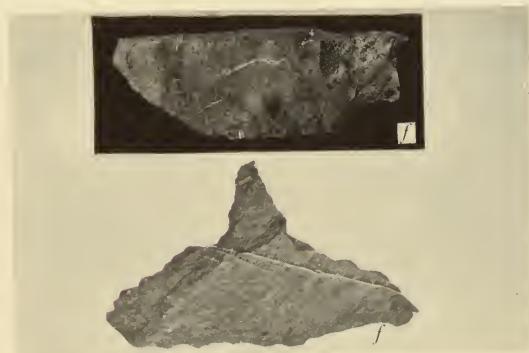


PLATE XXVII

Method of manufacture of weapons and *patu* of Group I: *a*, Stone weapon reduced to shape by splitting. Length 10 inches (255 mm.). Bishop Museum.—*b*, Stone weapon reduced by splitting. Length about 9 inches (229 mm.). Bishop Museum.—*c-d*, Stone weapon illustrating the pecking method of manufacture. Length 8 inches. Hodgson collection.—*e*, *Patu* of Group I. Length 14 inches (356 mm.), maximum width $5\frac{1}{4}$ inches (133 mm.). The grip is fully developed. Canterbury Museum.—*f*, Two views of *patu* of Group I. Length $11\frac{1}{2}$ inches. Longitudinal edges almost straight. Grip poorly developed. Dominion Museum.—*g*, Two views of *patu* of Group I. Length $10\frac{1}{2}$ inches (267 mm.). Distal edge straight. At either end of distal edge is a notch comparable with those shown in Plate LXVIII. Dominion Museum.—*h*, *Patu* of Group I. Length $14\frac{1}{2}$ inches (368 mm.), maximum breadth $4\frac{1}{2}$ inches (114 mm.), greatest thickness $1\frac{1}{4}$ inches (34 mm.) at junction of handle with blade. Dr. W. B. Benham states: "The blade has on each face a pair of curved, low ridges, rather unsymmetrical on both faces, convex towards handle, passing from each side towards middle where the two meet in a point directed away from the handle. Curve of blade regular and greater both laterally and towards flat end." The distal edge is notched. Otago University Museum.



PATU. METHODS OF MANUFACTURE



PATU. GROUP I

PLATE XXVIII

Patu of Group II and Group III: *a*, *Patu* of Group II. Length $12\frac{1}{2}$ inches (318 mm.). Poll convex and symmetrical. Longitudinal edges concave. Distal edge straight, shoulder ends fully represented. The prominences at either end of the distal edge indicate clearly the origin of the prominence in *g* and *f*. British Museum.—*b*, *Patu* of Group II. Length 13 inches (330 mm.), maximum breadth $3\frac{1}{2}$ inches (89 mm.). Canterbury Museum. *c*, *Patu* of Group II. Length 12 inches (305 mm.). Outline similar to *A* except that distal edge is curved convexly. British Museum.—*d*, *Patu* of Group III. Length 14 inches (356 mm.), maximum breadth 4 inches (101 mm.). Poll conical and unornamented. Grip fully developed and straight. Longitudinal edges of blade slightly curved. Distal edge has strong convex curve. Dominion Museum.—*e*, *Patu* of Group III. Length 10 inches (255 mm.), maximum breadth 3 inches (76 mm.). This example represents the typical form of the group and is closely parallel to the Maori *mere pounamu* form. Bishop Museum.—*f*, *Patu* of Group III. Length $11\frac{1}{2}$ inches (292 mm.). Shape similar to *E* except that poll knob is more developed. Canterbury Museum.—*g*, *Patu* of Group III. Length $14\frac{1}{2}$ inches (368 mm.), maximum breadth 5 inches ($127\frac{1}{2}$ mm.). Poll unornamented, longitudinal edges curved convexly. A prominence at either end of distal edge. Canterbury Museum.



PATU: GROUPS II AND III.

PLATE XXIX

Patu of Group IV and Group V: *a*, *Patu* of Group IV. Length 14 inches (356 mm.), breadth 4 inches (101 mm.). Poll ornamented with two knobs. Grip merges in blade. Longitudinal edges merge with distal edge in a continuous convex curve. Bishop Museum.—*b*, *Patu* of Group IV. Length 13½ inches (343 mm.). Poll ornamented with two knobs which appear to represent human faces, though judging by Maori analogy we should expect them to be birds. Grip almost merged into blade. Shoulder end slightly represented. Longitudinal edges curve towards distal edge, which is straight. British Museum.—*c*, *Patu* of Group IV. Length 13 inches (330 mm.). Poll, grip, and blade as in *B*. British Museum.—*d*, *Patu* of Group IV. Length 11½ inches (292 mm.), maximum breadth 3½ inches (89 mm.). This very interesting weapon has several features not typical of the group. Material, whalebone. The serrations, which probably originated from deep and closely placed notches, seem to be identified with the material, for they appear on whalebone weapons in other groups. The rectilinear outline within the serrations recalls the adz outline. Auckland Museum. *e*, *Patu* of Group V. Length 12 inches (305 mm.). Poll represents head of some bird. Grip fully developed. Edges much decayed. Canterbury Museum.—*f*, *Patu* of Group V. Length 13 inches (330 mm.), maximum breadth 4¼ inches (107 mm.). Material, whalebone. Auckland Museum.



PATU: GROUPS IV AND V.

PLATE XXX

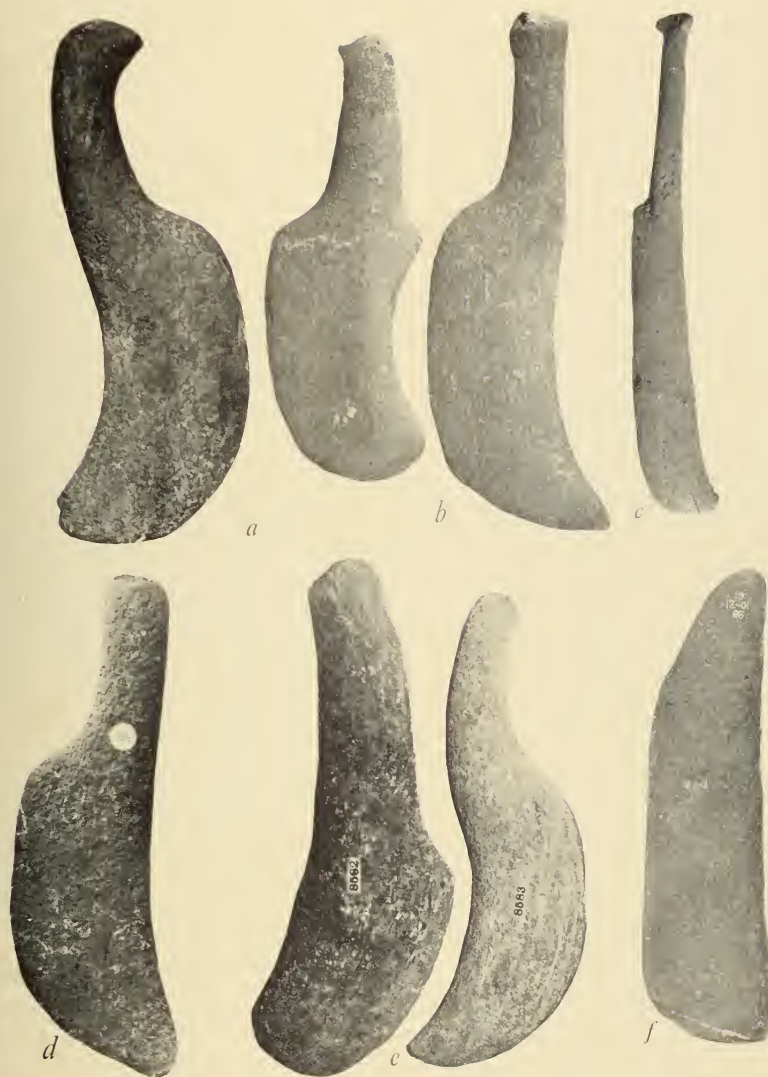
Patu of Group VI: *a*, Moriori *patu* of Group VI. In this beautiful example, perhaps the finest of all Moriori *patu*, the body and neck are those of a bird, but the head is human. Very great skill is shown in the utilization of the fine layers of quartz to represent the wing and feathers of the bird. Otago University Museum.—*b*, *Patu* of Group VI. Length 11½ inches (292 mm.). Material, whalebone. Poll symmetrical and curved convexly. Grip curved. One shoulder end normal, other vestigial. Distal edge merges in longitudinal. Influence of bird motive seen in curve of grip. British Museum.—*c*, *Patu* of Group VI. Length 13½ inches (343 mm.). This weapon like most of those which follow clearly represents *Porphyrio melanotis*, which is native to the islands. The right shoulder end is indicated and a very slight prominence indicates the right end of the distal edge. Bishop Museum.—*d*, *Patu* of Group VI. Length 17 inches (431 mm.). In this example the distal edge merges into the right longitudinal edge without any demarkation. The left shoulder end is more prominent than the right. The shoulder is formed by two curves as in Plate xxvii, *h*, and fig. 30, *a*. Auckland Museum.—*e*, Drawing of whalebone dagger. After Balfour (62, No. 80).



PATU: GROUP VI AND DAGGER.

PLATE XXXI

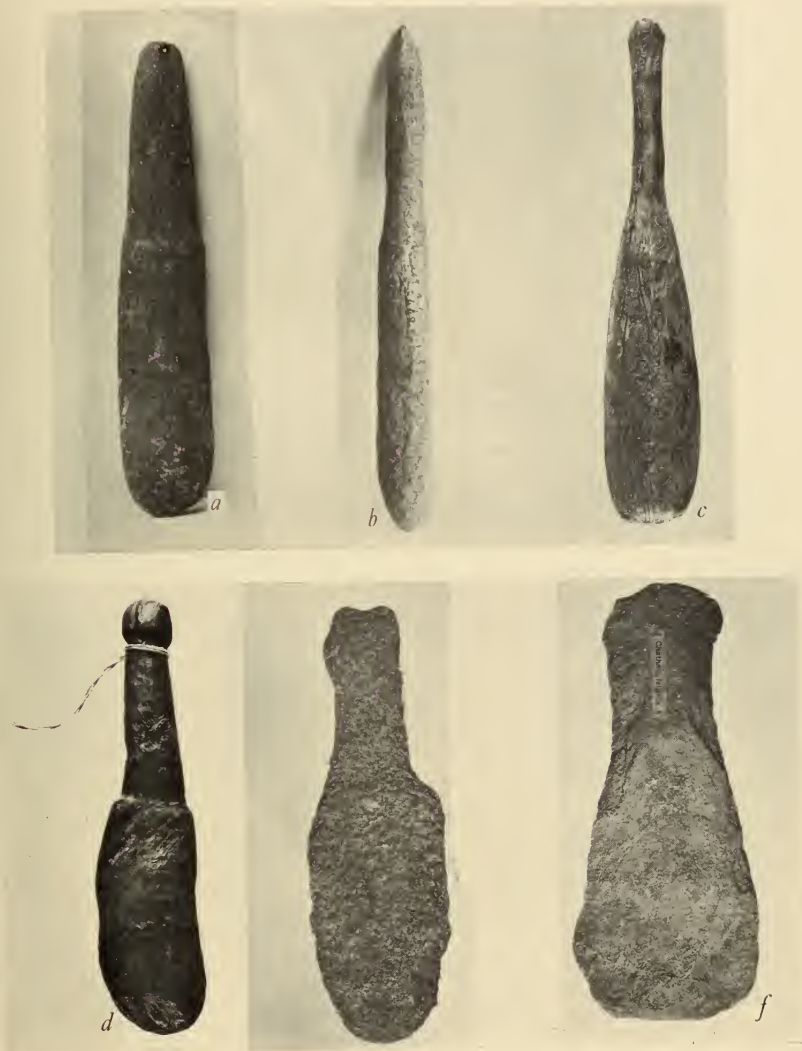
Patu of Group VI: *a*, Moriori *patu* of Group VI. Length 12 inches (305 mm.). In this example neither shoulder ends nor ends of distal edge are indicated. British Museum.—*b*, Two stone *patu* of Group VI. Length, respectively, about 12 inches and 16 inches (305 mm. and 406 mm.). The left-hand weapon shows the two shoulder ends, which are absent, however, in the other weapons. In the right-hand weapon a prominence marks the junction of distal and longitudinal edges. This example has been described by Von Haast (25). Canterbury Museum.—*c*, *Patu* of whalebone. Length 17½ inches (443 mm.). Canterbury Museum.—*d*, *Patu* of Group VI. Length 11¾ inches (298 mm.). Degenerate bird form. Dominion Museum.—*e*, Two *patu* of Group VI. Length, respectively 12½ inches (318 mm.) and 13 inches (330 mm.). Degenerate bird form. Bishop Museum.—*f*, Unclassified Moriori weapon. Length 10 inches (254 mm.). British Museum.



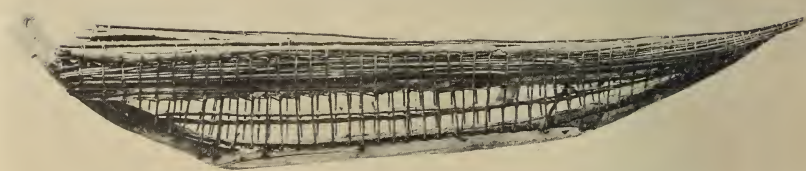
PATU: GROUP VI.

PLATE XXXII

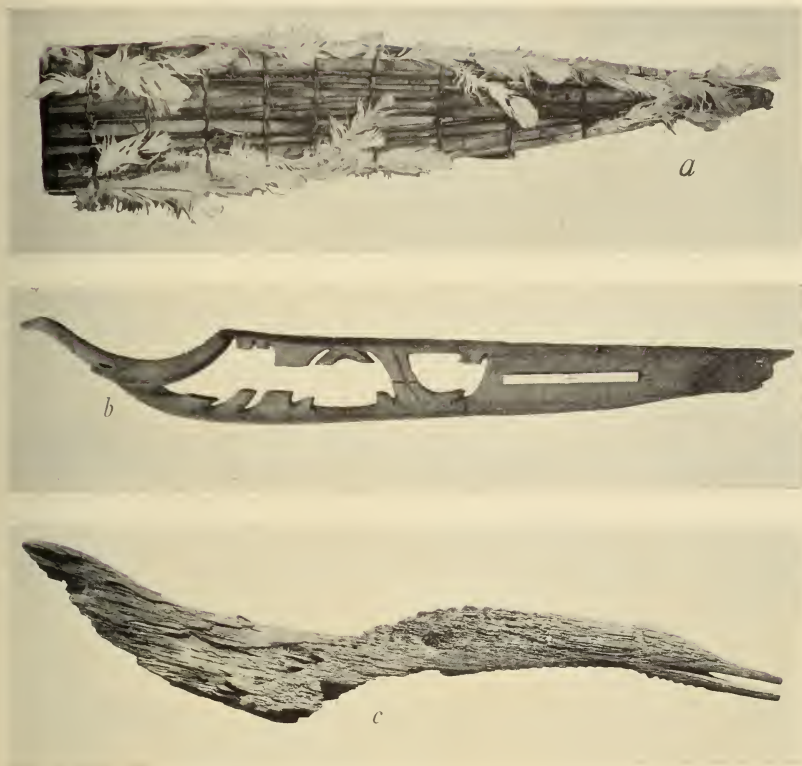
Beaters and pounders: *a*, Stone fern-root beater. Length 5 inches (128 mm.). Otago University Museum.—*b*, Stone fiber beater. Length 12 inches (305 mm.). Auckland Museum.—*c-d*, Wooden flax or fern root beaters. Length $4\frac{1}{2}$ and $5\frac{1}{4}$ inches (114 and 133 mm.) Chudleigh collection.—*e-f*, Stone fern-root pounders. Length about $8\frac{1}{2}$ inches (217 mm.). Hodgson collection.



POUNDERS OR BEATERS.

*a**b**c*

MORIORI BOATS: *a*, WAKA-KORARI. CANTERBURY MUSEUM. SEE ALSO FIGURE 35, *a*, *b*.—*b*, WAKA-KORARI. DOMINION MUSEUM.—*c*, WAKE-RIMA. DOMINION MUSEUM.



a, MODEL OF A MORIORI RAFT, SEEN FROM ABOVE. CANTERBURY MUSEUM.—*b*, CARVING, PROBABLY A BOW-PIECE, OF A WAKA-KORARI. LENGTH 73 INCHES WITHOUT FURTHER MATERIAL IT IS NOT POSSIBLE TO EXPLAIN THE ORIGIN OR MEANING OF THE OPEN WORK, BUT THE BIRD IN FRONT IS EVIDENTLY OF THE SAME KIND AS THOSE REPRESENTED IN THE HOUSE CARVINGS. CANTERBURY MUSEUM.—*c*, CARVING, PROBABLY ONE OF A PAIR OF BOW-PIECES, OF A WAKA-KORARI. LENGTH 25 INCHES. CANTERBURY MUSEUM.



Photograph by H. Renwick.

A. LANDSCAPE, CHATHAM ISLANDS.



B. REPRESENTATIONS OF BIRDS; CARVINGS ON THE WALL OF A CAVE AT TE-ANA-A-NUNUKU,
CHATHAM ISLANDS.

